Fall 2008

Varve (Fall 2008)

Iowa State University Department of Geological and Atmospheric Sciences

Geosciences Varve

Fall 2008

Keeping in touch with Alumni, Students, Friends and Faculty
of the Department of Geological and Atmospheric Sciences

Geosciences on the move

Smith gift, field camp renovations are transforming the department

IOWA STATE UNIVERSITY
College of Liberal Arts and Sciences

Varve

Carl Jacobson, chair
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Features: Dave Gieseke and Steve Jones
Design: Sheena Lara

Varve is published once a year for the alumni, friends, and faculty of the Department of Geological and Atmospheric Sciences at Iowa State University, an academic department in the College of Liberal Arts and Sciences.

Please send news about yourself and your family for next year's Varve to the Editor at the address below or by e-mail to pgspry@iastate.edu.

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On the cover

Pictured, alumni participants at a recent geology field camp reunion. A major gift from a Houston couple and improvements at the camp are changing the geosciences at ISU. See page 16.
Photo by Dave Gieseke.

Features

Greetings from Iowa

I certainly don't have to tell any of you in the Midwest about our very wet spring and early summer, and I'm sure those of you in the rest of the country heard the news, as well. Ames did experience some flooding, but compared to places like Iowa City and Cedar Rapids, the impact was relatively minor. As is usual in wet years, the businesses along South Duff were reminded that this was not one of the wisest areas to build. ISU, however, escaped relatively unscathed. (Not so for the University of Iowa, which has reported $230 million in damages!) Also fortunate is that no one within our department had any damage to their homes. On the other hand, alumnus Lee Potter (M.S., 1988), who is now at the University of Northern Iowa, sustained significant flood damage to his house; fortunately, he was insured. We hope the rest of you in Iowa and surrounding areas are surviving. The good news is that the second half of the summer and early fall were marked by excellent weather. In fact, the corn crop is on track for a near record and the soybean harvest, while expected to be down a bit from recent years, is still looking pretty good. We do worry about these issues because of the implications for the state budget, particularly considering the current state of the national economy.

Department News

On the faculty front, I am saddened to report that we have lost two faculty members, Gérman Mora (isotope geochemistry/paleoclimatology) and Jiasong Fang (biogeochemistry). We wish them the best in their new ventures. The good news is that we will conduct two faculty searches this year, one in stratigraphy/sedimentation, the other to replace either Gérman's or Jiasong's position. We hope to conduct an additional search in the following year to fill the second slot left open by the departures of Gérman and Jiasong.

I'm very pleased to announce three faculty and staff awards this year. Emeritus Professor Carl Vondra was named an Honorary Iowa State Alumnus. This is the highest honor given by Iowa State through the ISU Alumni Association to individuals who are not graduates of the institution. This award recognizes Carl's "significant contributions to Iowa State's welfare, reputation, prestige and pursuit of excellence." Congratulations also go to Bill Simpkins, who was honored this year with the Award for Outstanding Achievement in Teaching from the College of Liberal Arts and Sciences (LAS). This follows Bill's previous selection as an LAS Master Teacher. Both awards recognize his exceptional efforts in the classroom. Last but not least, Mark Mathison, our all-around departmental technical support person and field camp manager, was honored with the College's Outstanding New Professional Award. I can't even begin to list all the different areas in which Mark provides us with support. Every department should have a Mark.

Alumni Events and Awards

As usual, we enjoyed seeing many of you at various alumni events during the year. The gathering at the Annual Meeting of the Geological Society of America in Denver last fall went particularly well. Normally, our GSA alumni activities center on the "all-alumni reception" sponsored by GSA. Unfortunately, this venue does not typically draw alumni from the local area who are not also attendees of the convention. To help turn that around, we decided to with an "off-site" location for the event. Thanks go to Denver-area alumnus Kent Gorham for suggesting Pint's Pub not too far from the convention center. We had a great turnout from faculty, alumni, and guests, and the food was wonderful.

We also had a very nice gathering at the Annual Meeting of the American Association of Petroleum Geologists in San Antonio in April, which coincided with the city's annual Fiesta celebration. We started out at the AAPG all-alumni event, but then migrated to the private party hosted by Seismic Micro-Technology (SMT) in a restaurant along the Riverwalk. As many of you know, SMT is the company founded by alumni Tom and Evonne Smith. Tom and Evonne sold

the company last year, but continue to maintain a relationship with the firm, and we thank both the Smiths and SMT for welcoming us to their party. We had a great balcony view of the Fiesta Parade. If you have not been to San Antonio for this event, I greatly recommend it. For spring 2009, the AAPG meeting will be held in Denver. We hope to see many of you there.

For those of you who have not been to campus in a while (or even those who have), mark your calendars for a Geology Alumni Days gathering tentatively scheduled for Friday, October 9 to Sunday, October 11, 2009. The event will begin with a reception Friday evening, with the main activities to take place on Saturday. These will include time for socializing, a presentation on the state of the department, an alumni careers panel directed toward students, and a luncheon and dinner. For those so inclined, Sunday is reserved for an optional field trip. Look for details in next year's Varve. By the way, this is a good place to mention that if you have not been receiving e-mails from us about departmental events and the like, and would like to be informed of such activities, then please send your e-mail address to me (cejac@iastate.edu), Jane Dawson (jpdawson@iastate.edu), or DeAnn Frisk (dfrisk@iastate.edu).

Every year, in collaboration with our College, the Department presents one or more Geology Distinguished Alumni Awards. This year's recipients will be Rick Chamberlain (B.S., 1977; M.S., 1980) of Strategic Decisions Group in Houston and Howard White (B.S., 1973; M.S., 1976; Ph.D., 1981) of Anadarko Petroleum in Houston. As many of you know, Rick and Howard each teach an exercise at field camp every summer, which they do on a volunteer basis. Their participation provides us with critical assistance in staffing the camp and is a wonderful way to provide our students with a window into the oil and gas industry. I cannot overemphasize how much we appreciate their contributions, and we look forward to honoring Rick and Howard for their service to camp, as well as their very successful industry careers.

Field Camp

Field Camp continues to be in a transition with regard to staffing. After Carl Vondra's retirement, alumnus Erik Kvale (B.S., 1978; M.S., 1982; Ph.D., 1986) served as Director from 2004-2006, but needed to relinquish this position when he moved from the Indiana Geological Survey to Devon Energy Corporation. For the past two years, alumnus Martin Helmke (Ph.D., 2003) of West Chester University of Pennsylvania has filled this role. However, this has always been viewed as a temporary measure because of Martin's responsibilities to his home university. Sadly, he will not be back as Director next summer, but we have plenty of other staff to cover the necessary duties. For the past several years, Jane Dawson from the Department has been doing a great job running the hard-rock exercise in the Wind River Mountains, assisting with the Yellowstone-Teton trip, etc. Furthermore, Mark Mathison, besides his camp manager duties, also assists with instruction. In addition to Martin Helmke, this summer we also relied on two other alumni as part of the camp staff – Karen Noggle (M.S., 1986) and Rob White (B.A., 2007). As noted above, alumni Rick Chamberlain and Howard White also provide assistance, and the University of Nebraska, Lincoln, our partner in this endeavor, also sends faculty. Although most of the above people are not out for the entire summer, the fact is that we provide one of the highest staff to student ratios in the business.

Plans for the new camp facilities are making great progress. As you can see from the separate article inside, we anticipate having the new lodge building and shower house completed by the end of the summer. However, as discussed in the following section, we are still seeking funds to cover replacement of the student cabins.

Alumni Support

Let me start by thanking all of you for your very generous support. Last year, over 80 alumni from Geology and Earth Science contributed to our various Foundation accounts. This puts us among the top departments within our college in terms of percentage of alumni who donate to the program and this is clearly a point of pride for us. Your gifts help us in so many ways, including undergraduate and graduate awards and scholarships, student recruiting, student travel to meetings, field trips, field camp, visiting speakers, start-up packages for new faculty members, laboratory equipment, and so on. Thank you once again.

This year, I have some incredibly exciting and important news to report. Alumnus Tom Smith and his wife Evonne have recently made arrangements to gift $2,000,000 to the department during 2008-2011 to establish an endowed department chair in geology. The details of the gift are described in a separate article. Briefly summarized, the annual earnings of the endowment will be used by the Chair to help the department "… become a world class leader in the field of geology." This is truly a seminal event in the history of the department and we are deeply indebted to Tom and Evonne for their longstanding support of the department in so many different ways

One of the great benefits of the new gift from the Smiths is that the distributions can used broadly for faculty and student support. This allows us to focus future fundraising efforts on specific needs. Indeed, it is clear that our current emphasis must be on finishing the field camp renovation. The new lodge and shower house will immensely improve the camp experience. However, these improvements will still leave the students housed in the same World War II-era internment camp buildings that we've been nursing along for the past 50 years. The capstone experience provided by the field course is just as essential now as when we first embarked on this endeavor. Yet, the current dormitory buildings will not take us through our next 50 years in Wyoming. Furthermore, there are so many other ways we could use this facility, such as for industry field trips, Elderhostels, teacher workshops, Alumni Association trips, etc., if we could provide an upgraded level of lodging. Our estimate is that we need an additional $600,000-700,000 for the next phase of renovation. We know that this is a daunting amount. Certainly, it will take some leadership gifts, but the many smaller donations will add up as well. Particularly considering the large number of you who already contribute on an annual basis, and the very generous matching programs of many of your employers, we are confident that if we continue to focus on this goal for the next several years, that we can attain success. Won't you please consider a special, multiple-year pledge to help us with this goal. Feel free to contact me if you have any questions.

On behalf of all our faculty and staff, may I offer you the best wishes for the upcoming holidays and New Year.

Sincerely,

Carl Jacobson
Professor and Chair
Department of Geological and Atmospheric Sciences

Awards & Publications

Geology Student Awards

(Presented at the 2008 Spring Banquet)

UNDERGRADUATE AWARDS

Carolyn Jones-Eiler Summer Field Camp Scholarship
Mitchell Cline
Blake Bergerud
Casey Tierney

Peter Johnson Memorial Scholarship
Douglas Joachim
Charles Cogil
Ryan Shilling

Rodney Gardner Memorial Scholarship
Abigail Murray
Casey Tierney

Beck Family Scholarship
Jessica Feenstra

Kevin Connolly Field Camp Scholarship
Craig Popelka

Outstanding Undergraduate Award
Jessica Feenstra

Outstanding Senior
Douglas Joachim

GRADUATE AWARDS

Pick-of-the-Year
Nicholas Vreeland

Outstanding Teaching Assistant
Jenny Abrahamson
Tom Parham

John Lemish Award
Wen Deng
Peter Moore

Ames Rock & Mineral Club Award
Jeff Steadman

Graduate Student Seminar
Top Papers
Paul Ebert
Peter Moore
Tom Parham
Jeff Steadman

Outstanding Contributions
Paul Ebert

Other Graduate Student Awards
Abrahamson, Jennifer – Elected to Sigma Xi

Ebert, Paul – Elected to Sigma Xi

Steadman, Jeff – The geology and geochemistry of base metal sulfide mineralization in the Foster River area, northern Saskatchewan, Canada: Is it a Broken Hill-type deposit? Student Research Grant (Society of Economic Geologists Canada Foundation), $2,000.

Steadman, Jeff – The geology and geochemistry of base metal sulfide mineralization in the Foster River area, northern Saskatchewan, Canada: Is it a Broken Hill-type deposit? Student Research Grant (Society of Economic Geologists Foundation), $3,000.

GRADUATING STUDENTS

Fall 2007
Rob White (BA – Earth Sciences)
Seth Chamberlain (BS – Geology)
Dan Maier (BS – Geology)
Matt Graesch (MS – Geology)
Jackie Shumway (MS – Geology)

Jessica Feenstra

Wen Deng

GRADUATING STUDENTS
Spring 2008
Mark Sudweeks (BS – Earth Sciences)
Nergis Ani Anil-Bayrak (MS – Geology)
Todd Bonsall (MS – Geology)
Evan Chrstianson (MS – Geology)

Graduate Students and their Research Projects

Abrahamson, Jennifer - Hydrogeological and Geophysical Investigation of the Upper Bear Creek Watershed (Simpkins); M.S.

Ankerstjerne, Suzanne - Deformation of the Basal Till of the Des Moines Lobe near Ames (Iverson); M.S.

Blocker, Lucy - An Updated Source Water Protection Plan for Ames, Iowa Based on a 3-D Groundwater Flow Model and Particle Tracking (Simpkins); M.S.

Bright, Cammy - Faunal and Stable Isotope Study of Late Glacial and Holocene Abrupt Climate Changes in the Mediterranean Sea (Cervato); Ph.D.

Brooks, Bjorn - The Sources of Cycles in Phanerozoic Biodiversity (Cervato); Ph.D.

Byers, John - Ice Flow Past Rock Particles: An Experimental Study (Iverson); M.S.

Das Gupta, Shamik - Linking Microbial Diversity, Biogeochemistry, and Stromatolitic Structures of Eukaryote-Dominated Microbial Mats in an Acid Mine Drainage System, Indiana (Fang); M.S.

Deng, Wen - Quantitative aspects of break-up, coalescence, and vibratory mobilization of non-wetting fluids in porous space (Beresnev); Ph.D.

Ebert, Paul - Quantification of Residential Nutrient Inputs into Lake Macbride from Groundwater, Soil Water, and Overland Flow (Simpkins); M.S.

Faeth, Adam - Haptic Interaction Design using the H3D API (Harding); Ph.D.

Fornadel, Andrew - The Genesis of Gold-Bismuth-Telluride Mineralization at Kevala Pefka, Northern Greece (Spry); M.S.

Forsythe, Nathan - The Geology and Geochemistry of Gold Telluride Mineralization in the Navilawa Caldera, Fiji. (Spry); M.S.

Gaul, William - Laboratory Studies of the Behavior of Non-Wetting Droplets in Capillary Channels under the Effect of Vibrations (Beresnev); Ph.D.

Lincoln, Scott - Application and Testing of a Watershed Model for Predicting Floods in Small Watersheds in Iowa (Franz); M.S.

Macalister, Lucie - Evaluation of Conservative Practices using conjunctive Groundwater: Surface Water Modeling in Two Agricultural Water Sheds (Simpkins); M.S.

Martin, Rory - Carbonates of Iowa (Dawson, Spry); M.S.

Moore, Peter - Ice Flow and Sediment Transport near the Basal Thermal Transition of Storglaciaren, Sweden. (Iverson); Ph.D.

Newcomb, Matthew - A Multimodal Interface for Road Planning Tasks using Vision, Haptics and Sound (Harding); M.S.

Oren, Michael - Audio Platform Game (APG) Design for Players with Visual Impairments (Harding); Ph.D.

Parham, Tom - The InVEST Volcanic Concept Survey (Cervato); M.S.

Reichart, Collin - Study of Public Perception of Greenhouse Gas Budget and Climate Change (Cervato); M.S.

Reis Jon - Jurassic to Cenozoic Geologic History of the Southeast Castle Dome Mountains, Southwest Arizona. (Jacobson); M.S.

Sawyer, Lucy - A Comparison of Hydrologic Simulations between the Models SWAT and GFLOW in Two Agricultural Watersheds in Iowa (Simpkins); M.S.

Steadman, Jeff - The Geology, Mineralogy, and Geochemistry of Broken Hill-Type Mineralization in the Foster River Area, Northern Saskatchewan (Spry); M.S.

Vreeland, Nick - Deformation Patterns in Till of Drumlins of the Green Bay Lobe (Iverson); M.S.

Zhang, Jin – Microbial Soil Community and Structure in Grass Monocultures of Iowa as Determined by Organic Molecular Analyses and Incubation Experiments (Mora); Ph.D.

Faculty and Student Publications Journal Articles/Chapters in Books

Bindi, L., Evain, M., Spry, P.G., and Menchetti, S., 2007, Proposal for new nomenclature rules belonging to the pearceite-polybasite group. American Mineralogist, 92, 918-925.

Bindi, L. Evain, M., Spry, P.G., Tait, K.T., and Menchetti, S., 2007, Structural role of copper in the minerals of the pearceite-polybasite group: The case of the new minerals cupropearceite and cupropolybasite. Mineralogical Magazine, 71, 641-650.

Boggess, J. and Harding, C., 2007. Improving Introductory Calculus Education with 3-D Visualization and Virtual Touch (Haptics). Proceedings of the International Multi-Symposium of Computer and Computational Sciences IMSCCS 07, 2, 340-346.

Cervato, C., Rudd, J. and Wang, V.Z. 2007. Diagnostic testing of Introductory Geology students. Journal of Geoscience Education, 55 (5), 357-363.

Continued on page 29

Faculty Notes

Igor Beresnev, Professor

The ink had no sooner dried up on my writing for the previous Varve than I took off for Wyoming for the alumni reunion. What a blast those two short days in camp were! I met many of you, immersed my body in the cold waters of the creek, all amidst endless stimulating conversations! Thank you for making the reunion such a memorable event!

When I came back, I flew for a couple days to Washington, D.C. to sit on the proposal-review panel for the U. S. National Earthquake Hazards Reduction Program (NEHRP), administered by the USGS. This is an external-research program that funds studies in the general area of earthquake science and mitigation. The panel meets annually to review all grant proposals submitted for the upcoming fiscal year.

On the research front, two ongoing projects have kept holding my attention. They are on the same subject but addressing it from two different perspectives: the theoretical and numerical ones. We are attempting to build the theoretical understanding of the methods of enhanced petroleum recovery using acoustic and vibratory stimulation of wells (shake it up, and it will flow!). The trial technologies already exist but are lacking in the physical explanation of the mechanisms behind the elastic-wave effect on the residual oil. A three-year NSF project has started in 2007, in which, together with my faculty partner Dennis Vigil and our joint Ph.D. student William Gaul (both from the Chemical Engineering Department), we have set up an experimental apparatus allowing us to directly observe the oil mobilization by vibrations. We use a transparent porous cell attached to a shaker, in which residual oil saturation is created, and its dynamics can be observed through high-speed photography. Another three-year grant, from the Petroleum Research Fund, supports my Ph.D. student Wen Deng, working in our department on modeling the acoustic-mobilization phenomena using computational-fluid-dynamics. An interesting spin-off of this research has turned out to be the understanding that the break-up of continuous streams of oil into beads plays a fundamental role in the life of petroleum in the reservoirs; modeling this phenomenon may be an indispensable part of the whole picture of the vibratory recovery.

Historically, Russian investigators have done much background and practical work on the feasibility of acoustic stimulation of wells. I obtained a university foreign-travel grant and headed for Moscow in July to look into the recent progress in this area.

Ani Bayrak, my M.S. student for the past two years, defended her thesis in April. She was testing an idea of how one can determine the velocities of slip on rupturing faults during earthquakes using surface observations of seismic frequency spectra. We submitted the results to the Bulletin of the Seismological Society of America. The significance of this work is in that the slip velocity is one of those "hidden" parameters of earthquake sources that cannot be directly observed. Knowing them is nevertheless important for understanding the source processes and for predicting the seismic radiation.

I traveled to Houston to make a presentation at the ConocoPhillips offices. They were interested in the synopsis of our work published in 2004-2006 on the physics of radiation from Vibroseis sources. We are exploring the avenues for possible collaboration.

My teaching responsibilities have remained without much change. In the past academic year, I taught two Spring classes: Meteorology 432/532 "Instrumentation and Measurements" and Geology 451/551 "Applied & Environmental Geophysics". I will teach my traditional Geology 457/557 "Exploration Seismology" this coming Fall.

Cinzia Cervato, Associate Professor

Last year went by way too quickly. In the fall I received one of the LAS Master Teachers Awards, award that was given to instructors of large classes, a category I easily fit in. Our college is showing great interest in improving education at ISU especially in large classes and one of the initiatives is a Learning Community for Large Class Instructors that started last fall. I joined the Learning Community with 16 other faculty members from LAS and we met weekly to share our classroom experience and learn how to improve it. It was a very beneficial activity and it provided a forum for lively and constructive discussions. It was great to be part of the group while teaching Geology 100 and Meteorology 206, and I introduced new activities and changed somewhat the format of the courses as a result of what I learned in the LC.

This year I chair the Board of the Center for Excellence in Teaching and Learning. CELT has a new director, Steve Michelson from the Department of Ag & Biosystems Engineering. Corly Brooke, who directed the Center for 10 years, stepped down to return to full-time teaching.

Cinzia Cervato

This year I have limited my travels because of my teaching load and family responsibilities. Given the current situation with air travel, I do not miss the stress of having to deal with cancelled flights, weather-related delays and

missed connections! Doug Fils continues to work for CHRONOS focusing mainly on marine sediments and web services. Mitch Cline, junior in Geology, helped me construct age vs depth models for the almost 1800 Ocean Drilling Program holes as part of a contract from ODP. In late July Doug Fils has been invited by ODP to present our work at a meeting in DC and we will consider continuing this work to create a complete web-accessible architecture for all deep-sea drilling data in collaboration with Bill Ryan at Columbia University.

Last year I was invited to join a select group of geoscientists and cognitive scientists to develop a synthesis of research on teaching and learning in the geosciences. In the fall we are going to submit a suite of summary papers on the four key aspects of learning in geology: field work, spatial relationships, temporal perspectives, and complex systems. My contribution is on the significance of geologic time, written in collaboration with Robert Frodeman, chairman of the Dept. of Philosophy and Religious Studies at the University of North Texas.

Tom Parham, MS candidate, started working on the virtual volcano project last fall and is currently summarizing the results of the InVEST survey that we distributed to 6 colleges and universities in 2006. A new MS student, Collin Reichert, joined this fall.

Francesca (10) completed 4th grade at St. Cecilia. She won a bronze medal at a downhill ski race in the Dolomites (Italy) at the end of December. She is going to sing in the Chorale Choir of the Ames Children's Choirs and learned to play the clarinet in the school band. Ian is now 29 months old and likes to play ball with his sister. He is very happy at VetMed and is becoming a professional traveler like his sister. This year we traveled to Australia, New Zealand, Panama, Italy (twice), England, and California. We also undertook a road trip to Maine – 17 days, 4,200 miles where we saw a lot of geology, great scenery, and some history along the way. I took many photos of our beautiful country to share with my Geology 100 students and the students in the new LAS 125X course (Connections – Earth Explorations) that I am going to teach in the fall.

Jane Dawson and students. Geol 356 Structural Geology field trip to Baraboo, WI in April, 2008.

Jane Pedrick Dawson, Senior Lecturer

Once again, another year has flown by. Lately, I have been jolted into recognizing the passage of time when children of people I knew in college have shown up as students in my classes. It's a weird feeling!

This summer, I was working on organizing a new class for this fall semester, called "Exploring Iowa Geology" (Geol 109X). This is a 1 credit, first half-semester course that will introduce students to basic concepts in geology using Iowa examples. Weekly one-hour lectures will be supplemented by three Saturday field trips to locations throughout Iowa. One of the purposes of this class is to improve recruiting and retention of geology majors by offering field experiences early in a student's college career. I will be joined on each field trip by a different faculty member, allowing students the opportunity to get to know and interact with faculty outside of the classroom. I am planning on taking the students this year to see Pennsylvanian rocks in southern Iowa, Silurian rocks at Stone City and the Maquoketa Caves, and Pleistocene glacial landforms in the Iowa Great Lakes region.

I am involved this fall in a new Learning Community, called "Earth, Wind and Fire", together with Dave Flory in Meteorology and Cinzia Cervato. All incoming freshmen in both the geological and atmospheric sciences will participate in this learning community. These students have enrolled in the same sections of freshmen chemistry and math classes, and so will know people right away in those courses. Upper classmen in geology and meteorology will act as peer mentors and will organize tutoring sessions, social activities, and field trips. Learning Communities have become very popular at Iowa State as a way to help freshmen successfully navigate through their first year of college, so we are giving it a try to help improve retention of our majors and also to increase interaction between geology and meteorology students.

This past year, I taught two sections of Geol 100 and the structural geology lab. We had a strong group of students in the structural geology class. Carl Jacobson, my husband Bob, and I took them on a field trip in early April to Baraboo, Wisconsin, one of the "shrines" in structural geology. I also spent two weeks at field camp this summer, and taught a field exercise in the southern Wind River Range that Mark Mathison and I had developed last summer.

The highlight of the past year came late last summer. Bob and I and my mother and brother and his family took a wonderful two-week vacation to Alaska. We packed in as much as we could and thoroughly enjoyed every minute of it. I am racking up credit card purchases as fast as I can to get more

airline miles so we can go again!

Kristie Franz, Assistant Professor

This has been an active second year (have I really been at ISU for two years already?). This past year I taught two classes: Geology 402/502: Watershed Hydrology, and Geology 160X: Water Resources of the World. These are both favorite topics of mine, so I had a lot of fun teaching them. This was my first time teaching both classes and I really appreciate the positive attitude of the Iowa State students. Maybe they were just taking mercy on the new professor, but none of them gave me a hard time for the activities that didn't work out quite so well and they seemed to enjoy the parts of class that did work well. This past year, I participated in a faculty learning community on campus that was focused on teaching large classes. Because I am used to the very traditional approach to lectures, I learned a lot about teaching techniques that add variety to my lectures and make them more active. I found it very helpful.

Kristie Franz

I had two graduate students join me this past fall. Scott Lincoln is working on an MS in Environmental Science. His thesis project is to apply and test a watershed model for predicting floods in small watersheds in Iowa. Scott is currently testing the model on the Ames region. The goal of this project is to evaluate the model for use at a National Weather Service Weather Forecast Office, so we are collaborating with forecasters in Des Moines to determine the operational feasibility of our approach. The recent flooding in Iowa has given forecasting some prominence lately, so it is a good time to be investigating useful forecast tools. Phil Butcher, an MS student in Meteorology, is working on a snowmelt modeling study. He is making changes to a common snow model so that it will be capable of using satellite data for generating snowmelt predictions. This will allow information about spatial watershed conditions and processes to be included in the modeling, and hopefully improve springtime river forecasts. In addition, the new model uses multiple methods to simulate snowmelt, which allows us to identify the range of likely snowmelt scenarios (instead of being limited to just one). I presented the preliminary results from Scott's work at an international forecasting workshop in Italy last summer, and I presented the preliminary results from Phil's work at National Weather Service Office of Hydrology in D.C. in February.

On a personal note, my husband Martin and I bought a house north of town in May 2007. After a bit of work, we were able to move into it by last August. We are pretty excited because this is the first summer we have had a place to plant a vegetable garden. I had unsuccessfully tried growing potted tomatoes in California and Arizona before, so I can't believe how easily plants grow in an Iowa garden. I was gone for two weeks in June and when I got back I was a little freaked out by big the plants had become in that short time. I think I now understand where the concept for "Attack of the Killer Tomatoes" came from. Anyway, we will probably end up making more salsa than we could ever possibly eat...well, maybe. I can eat a lot of salsa.

DeAnn Frisk, Secretary

The highlight of the last year was a trip to Hawaii for Steve and me. We decided late last summer that we wanted to make the trip now rather than waiting until Steve retired. We were gone in November for a week returning on Friday after Thanksgiving. We had a fabulous time and I hope that we can go back sometime. We spent time on Oahu, Kauai and Hawaii. It was everything I had hoped it would be!

On the university and department level, I spent time attending all the meetings regarding the new model budget, how it affects the department and college and all the changes that are necessary to implement the new process. Beginning with the 2009 fiscal year (July 1, 2008), the university is up and running with the new budget model but also running in tandem with the current system. I never knew all the things that could be affected by changing the current system! Of course, this brings more work and responsibilities down to the departmental level. Maybe in larger departments it doesn't have the same impact as it does in my one person office!

In April, the secretary in Meteorology resigned and left the university. It's a full-time position funded equally by Agronomy and Geological and Atmospheric Sciences. Agronomy provided a partial replacement until we could hire someone. It was a long process but we finally hired someone to start in mid-August. She's transferring in from another department on campus so hopefully the learning curve won't be too steep!

Steve and I spend a lot of time keeping up with the grandkids activities. Lots of sports, music, 4-H, church, and school activities for 5 kids don't leave us with a lot of spare time. Of course, I wouldn't give up any of it for a minute. We are so fortunate to have both families close (Ames and Kamrar).

I'm always glad to visit with alums that stop by to visit or those that keep in touch via email. Keep in touch; it's great to know what's going on in your lives.

Chris Harding, Assistant Professor

My research is centered on the investigation of emerging technologies (also called Virtual Reality technology) for creating new and better ways to interact with 3-D geoscience data. I am also affiliated with the ISU Virtual Reality lab (VRAC) and its human-computer interaction (HCI) program. My main project is funded by the NSF and deals with sculpting 3-D computer models of the subsurface using a haptic force-feedback device called the Phantom. However, I have expanded this research into similar

using VR technology in other areas, for example in the area of geospatial (GIS) data and beyond that in the area of digital 3D art and design. This has given me the opportunity to collaborate with other scientists, most recently with a group from the Norwegian University of Science and Technology (Trondheim, Norway) on using 3-D computer graphics and other virtual reality technologies for the characterization of the Åknes Rockslide Site in Norway. The collaboration started last year with a 3-month summer visit to VRAC by Ph.D. student Trond Norvik and has resulted in several publications.

For the last year, I have funded two human-computer interaction graduate students: Adam Faeth, who is pursuing a PhD with a co-major in computer engineering, and Mike Oren, who graduated in May with a MS degree in HCI and who will stay in the HCI program to pursue a Ph.D. degree.

In his thesis research, Mike created a computer game for visually-impaired users, which is similar to the popular Mario or Sonic video games. Unlike traditional video games, this audio-only game has no graphical display and is played by listening to audio cues via headphones and by creating a 2-D mental map of the game world from the game sounds. The game was tested as part of an HCI study with 10 visually impaired users and was received with great enthusiasm. Mike's MS thesis project is part of my ongoing research into the use of audio to represent spatial relationships. In the longer term, the results of this project may extend into the use of audio cues in virtual environments for geoscience applications. This work has created many new contacts with visually-impaired people (including ISU students) and has been instrumental in stimulating several ideas for future research. These ideas center on the extension of the touch and audio technologies developed in my group over the last years for the benefit of visually-impaired users, in particular visually-impaired students, to enable them to perceive spatial information via non-visual channels. A major factor for this was the collaboration with Jim Koopman, a visually-impaired ISU student, who is now planning to attend the HCI program as a graduate student and has asked me to become his advisor.

Joe Bauman, Mitch Cline, Charles Cogil, Joe Wells (bandana), Doug Joachim, and Joe Wells on Neal Iverson's Geol 479/579 Surficial Processes field trip to Bevins Creek, MN

My teaching activities continue to center on teaching computer software systems for solving geoscience-related tasks. I teach two courses in Geographic Information Systems (GIS) - a general GIS intro course in the fall and an follow-up course about raster data and other, more advanced, GIS topics in the spring. I also teach a course about the 3-D visualization of scientific data, which I will be offered again next spring.

Neal Iverson, Professor

When this issue of the Varve goes to press in fall of 2008, I'll be on a sabbatical leave, which the University calls a "Faculty Professional Development Assignment" (an "assignment" being seemingly more directed and productive than idly wiling away time on "leave"). I've chosen a particularly exotic location for my leave: my walk-in freezer in Science I Hall. By early this fall, this freezer will house a 6500 lb experimental device that I have been designing with mechanical engineers at the DOE Ames Laboratory. This is the final year of a three year NSF-Major Research Instrumentation development grant aimed at building an experimental device for the study of glacier sliding. Many glaciers are speeding up in response to global warming by sliding faster. Better knowledge of sliding physics will help us predict future increases in speeds of glaciers with marine terminations, which is the single largest source of uncertainty in predicting rates of sea-level rise this century. I'll be spending this fall trying to get the device to work and expect to encounter many bugs—an unpleasant fact of life when developing new equipment.

Basal motion of glaciers is also responsible for diverse landscapes, including the flat till plains and drumlin hills of the Upper Midwest and the spectacular landscapes of glacial erosion that typify mountain belts. Last fall Jackie Shumway (M.S., 2007) finished an excellent study of deformation patterns in a till plain in northwestern Wisconsin; these patterns provided clues to how the Superior Lobe of the last glaciation moved. Similarly, building on the work of Matt Graesch (M.S., 2007), masters student Nick Vreeland spent the summer analyzing the till of drumlins in south-central Wisconsin, with the hope of inferring deformation patterns that might shed light on drumlin genesis. Graduate advisee, Suzanne Ankerstjerne, who started this fall, will be studying deformation of the basal till of the Des Moines Lobe near Ames. A second new student, John Byers, will be conducting laboratory experiments aimed at studying ice flow past rock particles. This is the process that drives glacial abrasion, a principal mechanism of glacial erosion. John will be co-advised by affiliate faculty member Denis Cohen.

Our field work on modern glaciers is focused at Storglaciären, a valley glacier in northern Sweden. There, as the subject of a three-year NSF grant, Ph.D. candidate Peter Moore (M.S., 2002) is studying ice flow and sediment transport at the glacier margin.

Through complementary numerical modeling, Pete has learned, among other things, that a commonly invoked mechanism of end-moraine formation—debris transport by thrust faulting of marginal ice—is mechanically unfeasible in most glaciers.

This year I taught geomorphology (to the best group of students I have had in my 11 years at ISU) and a course in geologic hazards. Activities included serving on an NSF proposal review panel and presenting priorities for glacier-related research to a National Research Council committee. Other travel included talks at Lehigh University, AGU, a Gordon Research Conference, the International Geological Congress, and the International Symposium on Dynamics in Glaciology and field work at Storglaciären.

I hear that a campus alumni event is being organized for the fall of 2009. It would be great to see you there.

Carl Jacobson, Professor and Chair

My biggest news for the year is that I'm still Chair. This past year was the last of my second term (the first term was four years and the second one three years). However, I've agreed to stay on for another three years, so the department is stuck with me. Being Chair has many positive aspects, but the biggest downside is that it doesn't leave much time for research. In my initial years as Chair I continued my fieldwork (largely with Jane Dawson) at the same pace as previously, but the problem was that I was lacking in time to write up the work. Thus, in the last few years Jane and I have cut back drastically on the field time. Instead of driving my truck to southern California/southwest Arizona and spending three weeks or more out there during Christmas break, we now might fly out just for a week and rent a vehicle.

In previous years I've mentioned my M.S. student Jon Reis, who is working on the Orocopia Schist and related rocks of the Castle Dome Mountains in southwest Arizona. Jon will be finishing his degree this fall and is now looking for jobs. In the spring, I will be taking on a new Ph.D. student, Rachel Lishansky. Rachel is from Russia and is in Ames because her husband has a faculty position in the Department of Mathematics at ISU. Rachel's has an M.S. in geology from Russia with an emphasis in hard-rock geology. She also spent some time at the University of British Columbia, where she performed U-Pb dating of zircon. Her interests are thus a good match to mine. As I alluded to above, we probably won't do a significant amount of field work, but Rachel will be involved with processing existing samples for radiometric dating and interpretation of those data.

Carl Jacobson and students. Geol 356 Structural Geology field trip to Baraboo, WI in April, 2008.

Our older son, Mark, is still working in New York City. He lives in Jersey City, New Jersey, which is just across the Hudson River from downtown Manhattan. He commutes to work by subway, and it's only about a 15-minute ride. This fall he will start part-time in a master's program at Columbia University in biotechnology. It involves both the science and business of biotech and he ultimately wants to work in finance in the biotech industry. Our younger son, David, graduated from ISU this May in aerospace engineering. He is now in an M.S. program in energy systems at the University of Michigan. Carol is still running a small company that creates interactive media for the pharmaceutical industry. Her group is owned by a company in New York City. She continues to travel quite a bit, mainly to the home office in NYC, but also to pharmaceutical companies in New Jersey, Pennsylvania, South Carolina, etc. The company she works for in New York is itself owned by a French advertising agency, Publicis Groupe, and she has been to Paris and London a few times related to this. I haven't managed to go along yet.

This summer our family took a cruise through the inner passage of southeast Alaska. The trip was offered through the National Geographic Society and was on a small boat (about 60 guests). We had great views of humpback and killer whales, seals, sea lions, sea otters, bears, eagles, etc. The glaciers were spectacular, too.

Mark Mathison, Teaching Laboratory Coordinator

I have just returned from a great field season in Sweden. Neal Iverson, Pete Moore, John Byers, Tom Hoyer and I spent three weeks working on Storglaciaren Glacier at Tarfala Station. We had great weather and a great team. This allowed us to drill 20 plus holes on the glacier and install sensors in the ice. Work went so well that we were also able to complete a ground penetrating radar survey and a differential GPS survey. With the work completed early we were able to meet Princess Victoria of Sweden during her visit to the station. Tarfala Station is a great place to work even if the sauna was taken away.

The Geology Field Camp was run this year by Martin Helmke and I with the help of alumni Howard White, Rick Chamberlain, Karen Noggle, Rob White and Erick Kvale. It was great to be back in the field with these people. We were able to spend more time in Yellowstone and the Tetons this year. This was Martin's last year as director of the camp. We are currently looking for a

new director for the up coming year.

We have had a switch in the architect for the design of the new Field Camp Facilities. This has been a small setback but we have made great strides forward on the final design over the past month. We hope to have construction started in the next year. Please see the conceptual pictures in this issue of the Varve. I would also like to thank Clay Postlethwaite and Joan Harpham for their donation of an ice maker to the Field Camp.

Upcoming projects for me include another season in Egypt with Tom Bown and work on the construction of a new ring sheer device. I will be helping Neal Iverson on the installation of a new ring sheer device that is about four times the size of the original.

Karl Seifert, Professor Emeritus

Carole and I have traveled quite a bit over the last year. Our big trip was a month long tour of Switzerland, Germany, and Austria last September. We teamed up with our long time travel companions from the Scranton, PA, area and hired a personal guide in Switzerland so I could visit the small Alpine village of Sevelen on the Rhine River in eastern Switzerland. My father's family, the Seiferts, migrated from this village to the US around 1880 to settle in NE Ohio and NW Pennsylvania where most of the Seiferts still reside. Sevelen is a beautiful little village with a single church and cemetery where several Seifert family still linger. From there we toured the mountainous regions of the high Alps before heading north to Eurail around Germany and Austria and cruise on the Rhine and Lake Constance. Every morning CCN announced that the dollar set a new record low against the Euro. We won't be going back soon.

Karl Seifert

Carole and I also attended the annual GSA meeting in Denver last fall and I attended a GAC-MAC meeting in Quebec City this spring. The Quebec meeting sponsored the largest international anorthosite conference I have seen in a couple of decades. Following the meeting we toured Quebec anorthosite outcrops north of Quebec City where I collected samples that intrigued airport security on the way home. Another anorthosite symposium will be held at the next annual GSA meeting in Houston this fall. Bob Dymek and I will present a couple of papers at that symposium. With any luck at all my coauthor Bob Dymek from Washington University in St. Louis and I will finally get our long manuscript on the Adirondack anorthosite published this coming fall or winter. It is out for review at this time. Meanwhile my former graduate student Jen Wolbers Musilek and I have submitted a manuscript on the Silver Creek dike to the Canadian Journal of Earth Sciences that is also still in review.

Prior to the annual GSA meeting in Houston this coming fall we are holding the third Seifert family reunion in Jackson, WY, before going to the west coast of Washington and Oregon. We will stay at B & Bs for much of the West Coast tour but for part of the time we will visit a friend at her cabin on Orcas Island in the San Juan Islands of Washington. With the price of gas being what it has become this will probably be our last long driving trip. Take care and let us hear from all of you alums.

Bill Simpkins, Professor

I continue water quality research at the riparian buffer sites on Bear Creek and at Lake Macbride near Iowa City, but my primary research focus has been the Ames aquifer study. I began working on the first 3-D simulation of the Ames aquifer. As part of this project, M.S. student Evan Christianson (B.A., Gustavus Adolphus College) produced an excellent 3-D groundwater model of the old Hallett's Quarry (now Ada Hayden Lake) showing that groundwater contributes 85 percent of the water and 42 percent of the phosphorus to the lake. Evan went to work for Barr Engineering, finished up his M.S. in December, and helped author the new Twin-Cities (Minneapolis-St. Paul) Metro area groundwater model.

Team Hydro welcomed Lucy Blocker (B.S., University of South Dakota) in 2007. She is interning for the City of Ames Department of Water and Pollution Control this summer. Her thesis will update the Ames Source Water Protection Plan based on the 3-D groundwater model. Jenny Abrahamson (B.A., Beloit College) took a position with the Nebraska DEQ in May and is writing her thesis on groundwater flow in the upper part of the Bear Creek watershed. Paul Ebert (B.S., Winona State University) moved to Minnesota in July to work on his thesis dealing with water quality and urban nonpoint-source pollution at Lake Macbride near Iowa City. Mindy Buyck (M.S., Illinois State University) left to take a position with the DNR in Des Moines. Lucie Sawyer (Macalester) (B.S., Colorado School of Mines) still works for the Army Corps of Engineers in Rock Island, got married last August, and is also trying to finish her thesis. I attended the Minnesota Groundwater Association conference on Biofuels and Water Resources in May with Jim Eidem (M.S. 1996) and had dinner with Beth Johnson (M.S. 1995) and her family. In the small world department, former students Jim Eidem, Evan Christianson (M.S. 2008), and Jon Carter (B.S. 2005; M.S. Wisconsin 2008) all work at Barr Engineering in Minneapolis.

I was interviewed by the media this year on ethanol/water issues and the Iowa floods. I was quoted in the Wall Street Journal in October (http://online.wsj.com/article/SB119258870811261613.html) and recorded a podcast for Sigma Xi's Year of H2O web page (http://water.sigmaxi.org/?p=81). The Iowa floods prompted me to write an Op-Ed in the Des Moines Register regarding the abysmal state of all water management in Iowa, particularly the management of groundwater. (http://www.desmoinesregister.com/apps/pbcs.dll/article?AID=/20080629/OPINION01/806290312/1166).

On the teaching front, I was notified this spring that I will receive an Outstanding Teaching Award from the College of Liberal Arts and Sciences for 2008. I am deeply indebted to the department for nominating me and to those of you that wrote letters for me. I offered Hydrogeology to 10 students from a variety of disciplines last fall. We tried "The Civil Action" case (http://www.ge-at.iastate.edu/civilaction07.shtml) and the plaintiffs won this time, raising their record to 4-2. As a result using the trial in the course, I was invited to participate in a NSF-sponsored workshop at Carleton College in May 2008 to develop a web-based curriculum using the trial for a geology course. We will be writing an article using the results from classes that implement the curriculum this fall. In the spring, I co-taught the Energy and the Environment course to 117 students with Paul Spry. I also taught a new and improved Applied Groundwater Flow Modeling to 8 students from a wide variety of disciplines on campus. I will be on sabbatical in fall 2008 with trips planned for the Germanic countries, the University of Göteberg in Sweden, and Washington State University. I plan to spend idle moments writing up some of my old research.

On the home front, Scott finished his second year at Gustavus Adolphus College in St. Peter, Minnesota, where he is studying biochemistry and chemistry. He was a bass trombone soloist with the Gustavus Symphony Orchestra in May, won a prestigious academic award from the college, and is working this summer at ISU in Entomology researching the phytoremediation potential of switchgrass. Kelsey graduated from Ames High in the top 3% of her class, presented a commencement speech, received a top choir award, and will attend Luther College in Decorah in the fall on an academic and vocal music scholarship under an "open option" major. Sadly, she can't wait to leave home! And, sadly, we will join the ranks of "empty nesters."

Please stop in and visit if you are in the area, but better check first to see if I will be in the country!

Paul Spry, Professor

I am writing this just after my return from a trip to northern Greece with my new Master's student, Andy Fornadel. Andy will be working on the Kavala gold-bismuth district with Panos Voudouris (University of Athens), and Vasilios Melfos (Aristotle University of Thessaloniki). We also had the opportunity to collect samples for a potential new graduate student project at the Fakos copper-molybdenum prospect on Limnos Island, and to visit several other deposits. I also continued my collaborative projects with my colleague Luca Bindi (University of Florence) on the nomenclature of silver sulfosalts, pearceite and polybasite. Nathan Forsythe (M.S.) is in the final stages of his project on the origin of porphyry copper and gold telluride mineralization in the Navilawa Caldera, Fiji. The project took a turn in direction last year as the anticipated gold telluride mineralization was not intersected in holes drilled by Golden Rim Resources. Nathan is now focusing on the alteration assemblages associated with the sulfides. Jeff Steadman, another of my Master's students, had an adventurous summer in northern Saskatchewan where he is

Paul Spry

doing a mineralogical and petrological study of base metal sulfide mineralization in the Foster River area. At one time he was evacuated from his field area due to bush fires. The good news is that he did not have to fight the vegetation in the area after the fires had passed!

I taught "Igneous and Metamorphic Petrology" and "Mineralogy and Earth Materials" with Ken Windom, and "Energy and the Environment" with Bill Simpkins last year. However, Bill will have the pleasure of teaching the latter course himself in the future as I will be teaching a new course in the Fall 2008 on fossil fuel and metallic mineral resources. Enrollment in my "Gems and Gemstones" class continued to increase as I had 160 non-science majors take the course. As part of Geol 507 Midwestern Geology Field Trip, graduate and undergraduate students and I went to Missouri in conjunction with a group of students from the University of Missouri. We had the opportunity to go underground in the famous Viburnum lead-zinc district and to visit several notable outcrops of Proterozoic basement rocks, and the Silvermines tungsten deposit.

I still serve on the editorial board of Mineralogy and Petrology, and had the pleasure of running a field trip last year to the large Cripple Creek gold telluride deposit as part of the national GSA meeting in Denver. I also organized and chaired a thematic session at the meeting in Denver in conjunction with the International Geological Correlation Program 486 on "Precious metal telluride and selenide deposits." Please continue to keep in touch by phone at (515) 294-9637, by e-mail (pgspry@iastate.edu) or just drop by.

Carl Vondra, Distinguished Professor Emeritus

The 2007/08 academic year began for me in the stratigraphy classroom once again. I enjoyed the semester even though it meant new preparations. I took two weeks off in late September and early October to join an excellent tour of Turkey with Georgia. We visited many of the classical archeological sites including Perge, Ephesus and Hieroplis. We enjoyed the excursion immensely. The strat course was covered by Jane Pedrick Dawson during my absence.

Georgia and I had an uneventful winter. We spent our time enjoying our home, shoveling snow, de-icing, following Cyclone men's and women's basketball, and attending events at C.Y. Stephens and Fisher Theatre.

Georgia and I joined our daughter, Gigi, and her family for a week in March at Cabo San Lucas, Mexico. I returned to Ames

to teach a course for the College for Seniors. The focus of the course was the geology of the Colorado Plateau. It was followed by a two-week field excursion to Colorado and Utah. Georgia was my course and excursion assistant. Thirty-five retirees ranging in age from 55 to 90 participated in the excursion. Our reviews indicated that the course was a success. We are planning a course and excursion concerning the geology of the Yellowstone-Grand Teton area for the spring and summer of 2009.

In late April during the Veishea celebration, I was honored to be named an "Honorary ISU Alumnus." The award, when it was first announced, was quite a surprise! I am greatly honored and very proud to have received this recognition. We were so pleased that all of our children and their families could join us in the celebration.

We had an exciting summer. We hosted our granddaughter, India, who turned 13 in May. It was nice to have a teenager with us again. In July we traveled to Montana to visit Charles and his family, and in August to visit Cindy. Best wishes to all. We hope you and your families have enjoyed good health and success.

Ken Windom, Associate Professor

It is hard for me to believe that another year has gone by. I believe this will be the 31st or 32nd write-up for the Varve that I have done since coming to ISU. If the saying about time flying when you are having fun is true, then I can only conclude that I must be having a blast because it sure doesn't seem like that long. I still have the same teaching duties as before. I have taught the Environmental Geology course every semester since Karl Seifert and Bob Cody retired. I change it a bit each year, however, because new information comes so fast that situations change from semester to semester. The Indonesian tsunami, Hurricane Katrina, and the Floods of '08 have all occurred since I took over this course. The price of crude oil almost tripled at its peak price this summer from where it was when I took over the class. Uranium prices spiked at 4 times the average price that had held relatively steady for decades before that. It truly is a dynamic course and requires me to keep up with current events. I also teach Geology for Engineers and Environmental Scientists each fall semester, as I have done for well over a decade. The audience in this class (mostly civil engineering majors) is quite different from the audience in Environmental Geology. Even though many of the topics are the same, the approach is different. It is an interesting contrast in perspective, however, as far as how the students view the material. As far as courses for majors, I still teach the lecture portion of Mineralogy and Earth Materials. I have been teaching half of the Earth History course (I get them up to the Phanerozoic), along with the igneous half of Petrology. As some of you recent alums know, this means new majors see me for essentially the first two years of their program. I continue to advise students majoring in Earth Science Education, and have been serving on the University Teacher Education Program Committee, which is the direct tie between ISU and the State Board of Education. This has given me an entirely different perspective of teacher education in this state.

Combined field trip between students from ISU and the U of Missouri to the Fletcher lead-zinc deposit, MO

As far as my family life, I have one major announcement to make: Steve, my son, was married on June 21st of this year. He turned 39 years old two weeks later. He had been a bachelor until this; nothing like waiting for the right girl to come along! Stephanie, his bride, and Mason, her 8-year old son, are lovely people and Jane and I are thrilled to have them in our family. Kim, our daughter, and her husband Mark flew out form San Francisco, and many members of Jane's family came up from Georgia for the wedding, so we had a wonderful family reunion. Now I just have to get used to being a grandpoppa.

Moving forward

The Smiths' donation to the Department of Geological and Atmospheric Sciences and field camp improvements are leading to 'unprecedented opportunities' and important changes.

A new gift from Tom and Evonne Smith has the opportunity to transform the Department of Geological and Atmospheric Sciences.

The Houston couple has established the Smith Family Foundation Departmental Chair in Geology to further enhance the mission of the department through a $2 million endowment

"This gift will provide us with unprecedented opportunities to advance the teaching and research missions of the department," said Carl Jacobson, professor and chair of the Department of Geological and Atmospheric Sciences.

The endowed department chair will provide annual earnings that will be used by the chair to support activities within the department. The Smith Family Foundation Departmental Chair in Geology is just the second such endowed position at Iowa State.

The funds will be used for such items as supporting cutting-edge research, recruitment of world-renowned faculty and attracting top students.

"During my years at Iowa State I formed life-long friendships and to be in close proximity to outstanding faculty members was a wonderful, unique opportunity," said Tom Smith. "Evonne and I hope that this gift will help establish the department as a world-class center of learning in the geological sciences."

Tom Smith holds both bachelor's (1968) and master's (1971) degrees in geology from Iowa State. The Smiths were the founders


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and former owners of Seismic Micro-Technology in Houston. The couple has previously provided $370,000 for improvements at the Carl F. Vondra Geology Field Camp near Shell, Wyo.

Jacobson says the department's total budget, including salaries is $1.8 million. The Smith gift will generate as much as $85,000 per year in additional funding for items the department was unable to fund in previous years.

"One of the great benefits of the new gift from the Smiths is that the distributions can be used broadly for faculty and student support," he said. "We should be able to bring in distinguished scientists as part of our seminar series and expose them to our outstanding department."

Jacobson has worked with the department's faculty members to outline additional opportunities including lab equipment, graduate student scholarships and matching funds for national research grants.

The Smith Family Foundation Department Chair in Geology will also allow the department to more narrowly focus future fundraising efforts. Jacobson said the department plans to finish the Vondra Field Camp renovations with to student housing at the field station. **dg**

Field camp improvements to begin in spring

The project to improve facilities at the Carl F. Vondra Geology Field Station in Shell, Wyo., is about to take a giant leap forward according to Carl Jacobson, professor and chair of the Department of Geological and Atmospheric Sciences.

"Right now we are planning on breaking ground on the project in the spring and hope to have the foundation poured sometime in April," Jacobson said.

The project, one of the top initiatives in the current College of Liberal Arts and Sciences fundraising campaign, will include building a new lodge to replace a current structure.

"The lodge will be constructed directly east of the current shower house and will not interfere with any existing buildings other than the so-called 'cook's cabin'," Jacobson said. "We will be able to continue working on the project throughout next summer's field camp."

The lodge will include a classroom/dining area and kitchen on the main floor. Staff quarters will be constructed on the second floor. The project is tentatively scheduled to be completed by the end of this summer, so 2010 will be the first summer it will be occupied by the ISU camp.

Jacobson said Jason Alread, a Des Moines architect who also teaches in the College of Design, is the lead architect on the project. Alread has visited the site and, being an instructor himself, has an excellent understanding of the department's needs. He investigated contractor options in Wyoming, and, in cooperation with staff from the department and the ISU facilities group, settled on a firm based in Cody.

"There is no question that the distance between Ames and the camp site adds an extra layer of complexity to the project," Jacobson said. "However, Alread has prior experience with remote projects, including in the western U.S., and we're also relying on the folks at Dirty Annie's and our neighbors Cliff and Row Manuel to help us while we're not there."

Tom (BS '68 and MS '71) and Evonne Smith of Houston, Tex., are the lead donors on the project, having committed $370,000 for improvements at the field station. Very substantial gifts have also been provided by Don and Barbara Henkel and Bruce Bowen, also of the Houston area. The above, combined with contributions to the field camp fund from many alumni during the annual giving campaigns of the last several years have provided sufficient

CODE ANALYSIS

Applicable Code:
2006 International Building Code
2006 International Mechanical Code
2006 Uniform Plumbing Code
2008 National Electrical Code
2006 International Fire Code

Chapter 3: Use and Occupancy Classification:
- First Level-Dining, Kitchen, and Mechanical: Group A-2 (Assembly area use intended for Dining and Classroo
- Second Level-Sleeping Areas and Office: Group R-2 (Residential)

Chapter 4: Special Detail Requirements for Use and Occupancy:
- None Applicable

Chapter 5: General Building Heights and Areas
- Mixed Occupancy Building of Group A-2, and R-2
- Construction Type V-A
- Areas from Table 503:
  - A-2 11,500 sf
  - R-2 12,000 sf
- Propose non-separated occupancy building per section 508.3.2 therefore group A-2 sets the area and height
- Allowable Areas:
  - Frontage Increase calculated to be 75%
    - § 8,625 sf.
  - Maximum Area: 20,125

Chapter 6: Types of Construction
- Type V-A
- Required Ratings per Table 601:
  - Structural Frame: 1 hours
  - Bearing Walls (Interior and Exterior): 1 hours
  - Non Bearing Walls (Interior): 1 hours
  - Floor Construction: 1 hours
  - Roof Construction: 1 hours

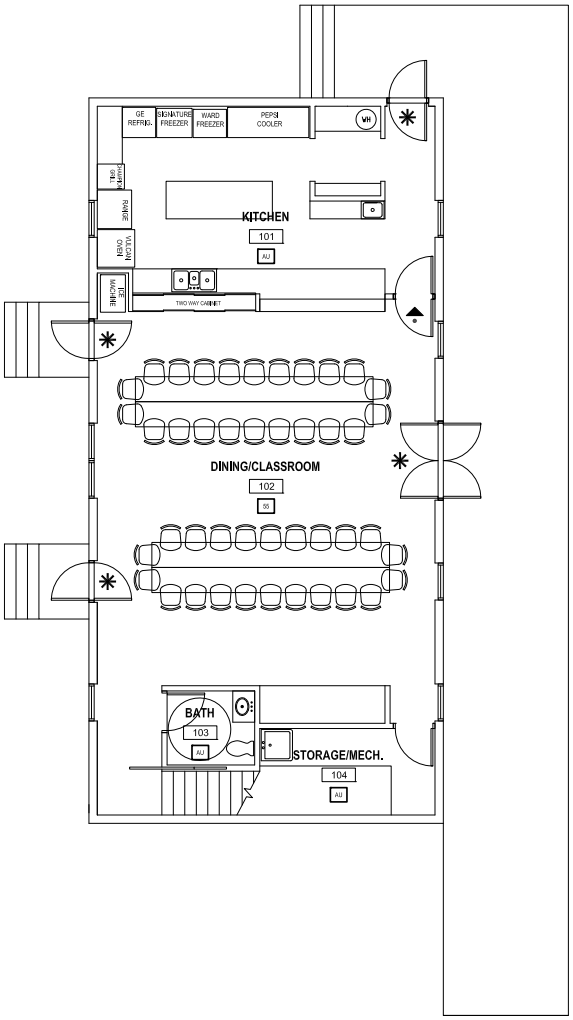
Chapter 9: Fire Protection Systems
- Smoke Detectors Required for Group R-2 per Section 907.2.10.1.2

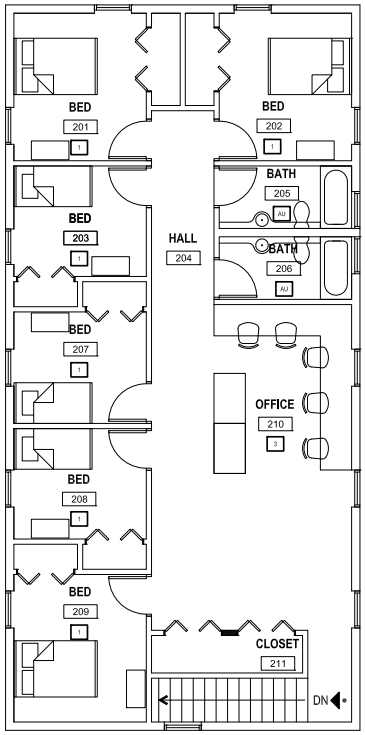
Chapter 10: Means of Egress
- Section 1004.1, Design Occupant Load
  - Group A-2: Floor 1 Occ. Load = 55
  - Group R-2: Floor 2 Occ. Load = 9
- Total: 64 Occupants
- 1 exit required from R-2 per Section 1015.1

Chapter 11: Accessibility
- Accessible route required to coincide with general circulation path per Section 1104.5
- Sleeping areas not required to be accessible per Section 1107.7.1

om)

requirements.





GEOLOGY FIELD CAMP
IOWA STATE UNIVERSITY
08/13/2008

substance
ARCHITECTURE
INTERIORS
DESIGN

funds to build the first phase of the project.

Fundraising efforts are going to continue for additional improvements, Jacobson said.

"I'm optimistic that we will be able to raise funding to finish off the project in the near future," he said.

Physical improvements are needed at the Vondra Field Station for a variety of reasons. The cabins, which are holdovers from World War II Japanese-American internment camps, are showing wear despite the department's best efforts.

"They weren't constructed very well to begin with," Jacobson said. "The current cabins aren't in good shape, but we can survive for the near term."

And students who utilize the camp's facilities have also changed in recent years.

"Students have much higher expectations than they did 20 years ago," Jacobson said.

Plus the department is hopeful that other groups, such as Iowa State departments and the outside group Elderhostel, will use the facility in the future. Individuals attending these types of gatherings would require in-cabin plumbing, which is not currently available.

"These folks and others we're hoping will use the field camp after the renovations are completed, won't want to go outside in the cold to shower," Jacobson said. "If we want to utilize the camp for other uses, we have to have better facilities."

The camp is already used by other entities including Dartmouth University. But Dartmouth uses the site for a short, fall geology excursion.

Jacobson envisions using the camp for ecotourism. The adjacent dinosaur sites, the Big Horn Mountains and the area's natural history and museums, would be a natural expansion for the facility's use. **dg**

Mark of all trades

Mark Mathison performs varied tasks for geology – skillfully and cheerfully.

His name is Mark, but he's a jack-of-all-trades for the geology faculty. Mark Mathison is the teaching lab coordinator in the Department of Geological and Atmospheric Sciences, but his title does not cover the range of his diverse duties.

Mathison does oversee the student computer lab, and even though he says it's "almost a full-time job in itself," there is more to his workload.

He also repairs computers and other equipment, assists faculty with field research, keeps the Wyoming geology field camp up and running all summer, and has been known to counsel students as the person who knows "the pulse of the department."

"It's nice to get a lot of variety," said Mathison. "There are always some new challenges."

The personable Mathison is known for solving problems. If a computer does not work properly, he's been known for staying well into the night repairing the bug-a-boo. He admits some problems really stump him, but through trial and error, his track record for repairs has been good.

"I'm not afraid to jump in and try to repair something. But sometimes it's over my head."

During field research in far-away and sometimes inhospitable environments, he's present to keep equipment running properly. "Doing field work, half the challenge is getting the equipment to work correctly," he noted.

At the rustic Wyoming geology field station, the Ames native is the person in charge with going out early and getting the camp ready for students and faculty. Because of the age and construction of the World War II-era buildings, Mathison is constantly performing his maintenance handiwork, including wiring, plumbing and carpentry. He's also done some vehicle maintenance. His work has saved the program "hundreds of thousands of dollars" over the years.

Mathison takes pride in making the popular camp functional and operational.

"It's a great place to work over the summer," Mathison said about the field camp. "It's almost the perfect location for geology."

Earlier in 2008, Mathison was in northern Sweden assisting Neal Iverson, professor of geological and atmospheric sciences, with research inside a glacier. Working in temperatures of 35-40 degrees (F), they had bored holes in the ice using pressurized hot water. Inside some 45 meters, they were measuring such things as temperature, water pressure and, later, how much the glacier moved.

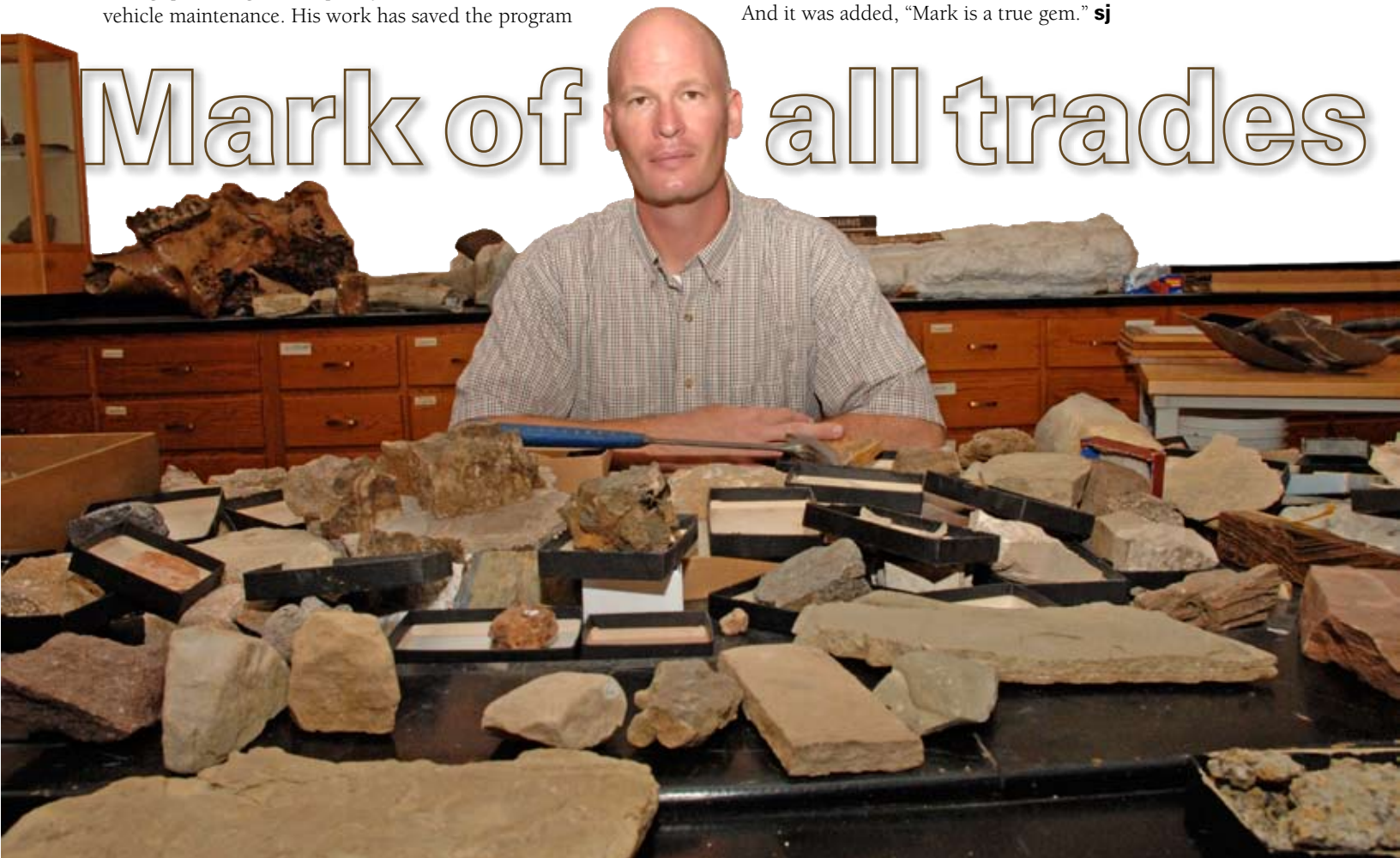
In such a harsh environment, equipment breakdowns were common, which kept Mathison busy. "There were lots of points of failure," he noted.

In recent years, Mark has spent up to six weeks annually in Egypt assisting some Duke University researchers studying fossil primates in the desert. (He made connections with the Duke scientists several years ago through a retired Iowa State faculty member.)

Mathison also has been involved in other field excursions, including Ethiopia to assist with research on early hominid sites.

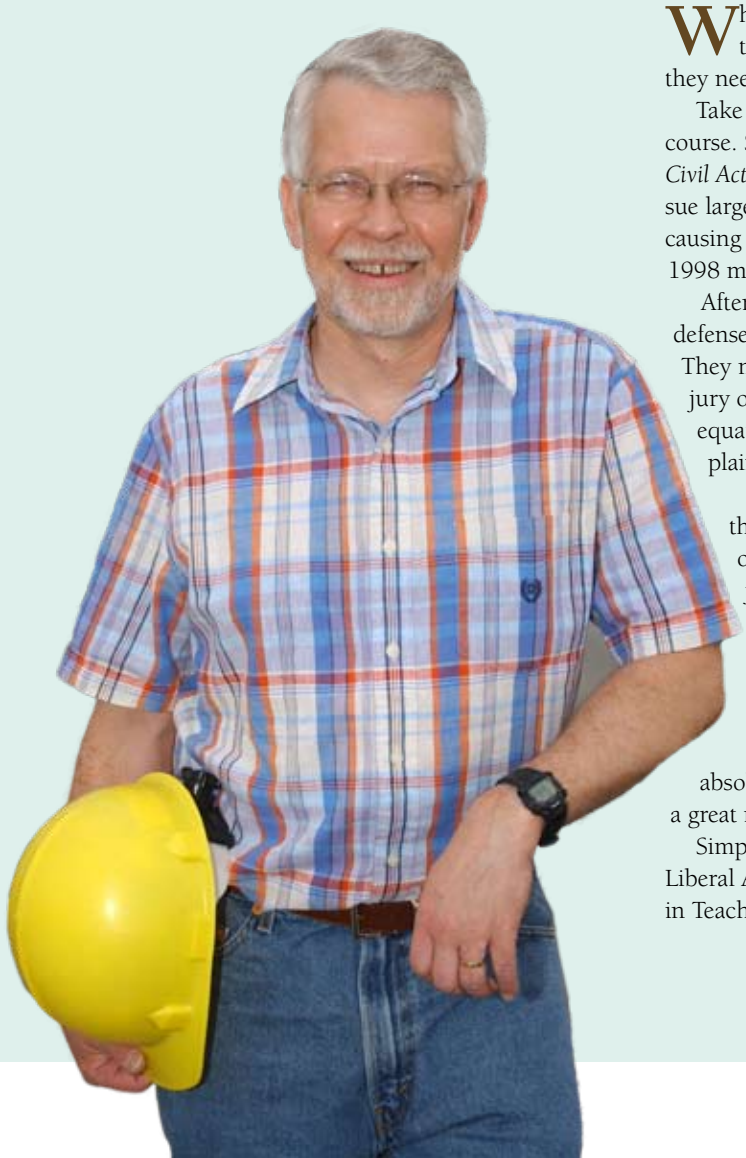
For all his contributions to the geology program, Mathison was recently awarded the Professional and Scientific (P&S) Outstanding New Professional Award from the College of Liberal Arts and Sciences. In his nomination papers, it was written his "innovation, determination, cooperative spirit and ability to tackle an extremely wide range of problems make him indispensable."

And it was added, "Mark is a true gem." **sj**



Mock trial

Geology's Bill Simpkins teaches subject matter in unique way.



When Bill Simpkins teaches, he not only wants students to learn the subject matter, he wants them to know why they need to know it.

Take his innovative annual mock trial in his hydrogeology course. Students read the 1995 non-fiction bestselling book *A Civil Action*, which is about some Massachusetts families who sue large corporations for contaminating their groundwater and causing cancer in their children. (John Travolta starred in the 1998 movie version).

After some hydrogeology lab exercises and coaching the defense or the plaintiff teams, the students re-enact the trial. They must present enough technical information to convince a jury of nonscience majors without boring them with complex equations. Simpkins has done the trial six times - the plaintiffs have a 4-2 lead.

"It forces the students to integrate all the knowledge of the course and convince a lay jury to decide for one side or the other," said Simpkins. "Their presentations and jargon used in the trial also provide me with feedback as to how well they are learning." Some of his students will become environmental consultants, Simpkins said, and they will testify in court as expert witnesses. The mock trial is an eye-opener for them.

"During the trial, they understand why they absolutely need to know the material I teach in the class. It is a great motivator for learning."

Simpkins was recently recognized by Iowa State's College of Liberal Arts and Sciences with a LAS Outstanding Achievement in Teaching Award. **sj**

Mr. Geology

Carl Vondra named honorary Iowa State alumnus.

One slide after another flicked onto the screen in a rustic community center in the tiny town of Shell, Wyo.

The slides represented almost 40 years of attendees at the Department of Geological and Atmospheric Sciences' field camp. Of course, no one but Carl Vondra, who served as the camp's director for those 40 years, would be making the presentation to the alumni assembled.

As the slides rolled across the screen, Vondra would identify the individual pictured. But more than that, he would tell the audience where the field camp alumnus was and what career path they took.

If you're counting that's over 1100 geology alumni. And Vondra says he's either in contact with, or sees, many of those alumni each year.

"It was a very unique experience I had at the camp," Vondra said. "We would spend six or eight weeks out there with the kids, eating breakfast, lunch and dinner, spending all day in the field and back at the camp at night.

"You get to know people pretty well in that type of situation. And it was hard to forget them. No other faculty in our department, and maybe at the university, had that kind of opportunity."

Few professors have had as profound an influence on their students and former students as Vondra, a Distinguished Emeritus Professor. He has made a steadfast commitment to keeping alumni connected to the university and to the field station.

Even now, after retirement, he regularly travels to national meetings with his wife Georgia where he meets many of the field camp's alumni.

"Invariably when I see an alumnus, they will immediately talk about the field camp and their experiences out here," Vondra said. "They developed strong friendships in addition to learning geology and I think they feel good about their experiences they had there."

That continued commitment has led to Vondra receiving the highest honor given by Iowa State through the ISU Alumni Association to individuals who are not graduates of the institution. He has been named a recipient of the Honorary Alumni Award, the first faculty member so recognized for his "significant contributions to Iowa State's welfare, reputation, prestige and pursuit of excellence."

This is just the latest in a series of honors that Vondra has recently received. The Board of Regents, State of Iowa, named the field station he directed for so many years in his name and he was listed as one of the university's 150 "VISIONaries" in the sesquicentennial issue of the ISU Alumni Association's magazine, VISIONS.

But the honorary alumnus award came out of the blue. In fact the Vondras were in Turkey when Iowa State President Gregory Geoffroy called to inform him that he was the recipient of the award.

President Geoffroy left a few messages on their answering machine, asking Vondra to give him a call.

"I wondered why President Geoffroy was calling and calling so many times," Vondra said. "I had no idea."

And after more than 40 years in Ames and at Iowa State, Vondra says this award, unlike any other, validates his years on campus.

"To me, this award means that the university thinks a great deal of my contribution and the contribution of the students that have attended and graduated from the geology department," he said.

"So many faculty members at this great university have invested a great deal of their lives and this means a great deal to me to be so appreciated." **dg**

This geology graduate mined years of success with diamonds

Bob Locker is an Iowa State geology grad who mined success with diamonds - in places like Wrigley Field, Comiskey Park and other Major League venues.

"I must be one of the few Chalmer J. Roy-educated students who didn't use his geology degree," said Locker. He was referring to the emeritus geology department head and dean of the College of Sciences and Humanities, the forerunner to the College of Liberal Arts and Sciences.

But the personable Locker did all right. The lanky right-hander is the only Iowa Stater ever to appear in a Major League World Series game. A 10-year veteran of the majors, Locker was a relief pitcher with the 1972 World Champion Oakland A's.

Locker was in Ames in early September for induction into the Iowa State Athletics Hall of Fame. Now a successful real estate broker in Lafayette, Calif., he came to ISU in the fall of 1956 with a blazing fastball. Not every pitch was a strike, however.

"I was a bit wild and needed to develop a pitch that moved," Locker said.

He thanks Cyclone baseball legend Cap Timm for his success. Timm, who coached ISU from 1938 to 1974, turned Locker into an accurate sinkerball pitcher. "I was not the greatest pitcher coming out of college," Locker said, "but Cap taught me how to pay attention to detail. Cap Timm was far and away the best baseball coach or manager I had."

Locker came to ISU from the little northwest Iowa town of George on the recommendation of his mother, a home economics alumna. "My mother told me how good Iowa State was." By his senior year, he helped lead ISU to a 12-6 record then signed a free agent contract with the Chicago White Sox. Five years later - including a stint in the military - he was called up to the majors.

A starter in the minors, he was turned into a reliever in the big leagues. White Sox manager and future Hall of Famer Al Lopez liked Locker's newfound accuracy.

"Al Lopez said, 'Let's try it,'" Locker recalled about the bullpen experiment. "Six hundred games later, I never started a game in the majors."

But Locker became one of baseball's best relievers for 10 seasons. He led the American League with 77 appearances on the mound in 1967. After being traded to the Seattle Pilots (which became the Milwaukee Brewers) then to the A's in late 1970, he played two full seasons in Oakland.

The 1972 season was most memorable. Playing with a who's who of teammates including Reggie Jackson and Rollie Fingers, the A's won the World Series over Cincinnati. Locker had a 6-1 record in '72 and played in the World Series.

After a stint with the Chicago Cubs, Locker left baseball in 1975. He and his wife, Judy, also an ISU graduate, raised their four children in northern California.

"When I came to Iowa State, I didn't know what I wanted to do," he said. Locker considered "engineering and/or law" but soon made a "quick switch to geology." He said, "Because of baseball, I never had a chance to apply my degree."

Why geology? "I had an interest in science and I loved the outdoors and nature." He studied lakes and streams in one course, which "helped me understand the things I loved." Locker is an avid outdoorsman.

Today Locker pitches praises for Iowa State, for his education and molding him into a pro baseball player. **sj**

Alumni Notes

Shawn-Blaesing Thompson

B.S. 1997; mudnmaps@gmail.com

Shawn recently made a move back to Ames with the cats, dogs, child, husband, and two cars from Washington State at the end of May. They saw a lot of gorgeous geology on the way, but only stopped in the Badlands of SD to take a closer look at things.

She is working for the USDA Agricultural Research Service at Iowa State helping to integrate technology (GIS and database development) into the researcher's daily work flow. She was recently voted in as the North Central Region Delegate on the board for the Association for Women Geoscientists. After ten years supporting her local WA AWG chapter she looks forward to her new responsibilities. Her husband, Joe, is excited to be teaching a 100 level geology course at ISU and looking for other work to fill his time.

Shawn Blaesing-Thompson (B.S. 1997) with her 4 year old daughter, Abby, in the Badlands, SD

They are busy getting their four-year old daughter Abby settled into a new neighborhood and hopefully preschool soon. As if that is not enough they are preparing for a "new little human" to join them in late March. Shawn sends her best wishes and would like to be contacted at mudnmaps@gmail.com or shawn.blaesing@ars.usda.wa.gov

Jonathon Carter

BS 2005; jonathon.carter@gmail.com

In Summer 2008, Jonathon completed M.S. degrees in Geology and Water Resources Management at UW-Madison. He began working as a hydrogeologist at Barr Engineering Co. in Minneapolis in July.

Tom Cloud

BS 1979, MS 1981; Tom.A.Cloud@conocophillips.com

Tom has worked as a geologist for Phillips Petroleum and now ConocoPhillips since he graduated in 1981. Office locations include Denver, CO (twice), Houston, TX (twice), Borger, TX (near Amarillo) and Stavanger, Norway. His experience is mostly prospect generation in both Exploration and Development including the North Slope Alaska, Uinta Basin UT, San Juan Basin, NM, SE Colorado, Warrior Basin, MS, Onshore SE Louisiana and NW Louisiana, and the North Sea, Norway. Play types include clastics, carbonates, coal bed methane, shale gas, and tight gas. Tom also worked several years as a petrophysicist.

Tom Cloud (BS 1979; MS 1981) participating in the memorial march in honor of the Bataan Death March in the Philippines during WWII

He and his wife, Tami, have been married for 26 years and they have one son Auston who is 16 years old. They have home schooled their son for the last 8 years.

Outside of geology, Tom was an EMT for 12 years and is currently a Certified First Responder with the ConocoPhillips Emergency Response Team. He also taught first-aid and CPR for over 20 years. Tom has a strong interest in music and plays several instruments including the hammered dulcimer. Most recently he has been involved with worship team music at church.

Tom volunteered with a Navy youth group called the Naval Sea Cadet Corps where his son was a member. One event that he participated in was a memorial march in honor of the Bataan Death March in the Philippines during WWII. The group hiked 26 miles in the desert and mountains of New Mexico along with active military, veterans and disabled veterans. It brought back fond(?) memories of Field Camp.

Jim Crowther

BS 1956; jimnhats@cox.net

Jim reports that he and Dave Schacht get together twice a year: Phoenix in February (for warmth and golf) and Mammoth Lakes, California, in August (for cool and golf). Dave's son is the golf pro at Mammoth.

Bill Boyd and his wife, Jan, have not been to Phoenix lately, either due to health concerns or because they can't tear themselves away from snow and insulated underwear.

Since retiring in 1992 Jim is no longer involved in things geological but still tries to keep up to date on developments.

Jim Englehorn

BS 1955; englehorn@worldnet.att.net

Jim works at the Denver Museum of Nature and Science and reports that he was published in the Journal of Vertebrate Paleontology, June 2008. This paper resulted from his work as a volunteer fossil preparator at the Denver Museum of Nature and Science. Members of JVP probably have seen the paper, or may go to the JVP website and view it there.

A redescription of Acroplous Vorax (Temnospondyli: Dvinosauria) based on new specimens from the Early Permian of Nebraska and Kansas, U.S.A. (J. Englehorn, B.J. Small, and A. Huttenlocker)

Richard "Dick" Fass

M.S. 1962, Ph.D. 1964; rfaas@CableOne.net

After receiving his Ph.D. in 1964, Dick was employed as the 'soft rock' instructor in the Geology Department of Lafayette College, Easton, PA. He spent the last 19 years as Department Head and retired as Full Professor in 1995. In all, Dick spent 31

years at Lafayette. He developed interests in marine geology and spent summers doing sediment research in Chesapeake Bay, Cape Lookout Bight, Bay of Fundy, and often in the Scheldt Estuary in Belgium.

For many years during spring breaks he would teach a short course in Quaternary Marine Sediments at the Free University of Brussels. Dick continued to teach this course for several years at the Marine Sciences Department at the University of Southern Mississippi, Stennis Space Center, Mississippi where he is presently a Research Scientist. He and his wife Dolores live in Diamondhead, MS on the Mississippi gulf coast, an hour east of New Orleans and 45 minutes from the Biloxi area entertainment complex (12 casinos, golf courses, a water park, and a white sand beach). Dick especially enjoyed reading the last 'Varve' with its article on Carl Vondra and the Shell Wyoming field camp. Dick had the job of summer camp manager in 1958 and was pleased to see the pent-a-john still standing!

Tracy Frank (BS 1989) and geologist husband Chris Fielding endure temperatures of minus 30 degrees (60 with the wind-chill!) during a two-day snow-survival course on the McMurdo ice shelf. Mt. Erebus, the only active volcano in the area, smokes in the background.

Tracy Frank

B.S 1989; tfrank2@unl.edu

Tracy continues to work in the Department of Geosciences at the University of Nebraska-Lincoln, where she was recently promoted to associate professor and always feels conflicted at ISU vs. UNL football games. Her work focuses on understanding past climate change and how it is reflected in the rock record. Last year, Tracy spent just over two months in Antarctica, where she participated in the ANDRILL (ANtarctic DRILLing) Project, an international coring program designed to elucidate the Cenozoic climate history of Antarctica (http://www.andrill.org/).

Barry Gross

M.S. 1970; gro1442003@yahoo.com

Barry graduated from ISU in 1970, during the days of Keith Hussey, Donald Biggs, John Lemish, Carl Vondra, Lyle Sendlein and Karl Seifert, the last of whom was the major professor for his Master's thesis. According to Barry he has not been a poster child for the Geology Department over the past thirty plus years because he moved in another direction after graduation. He met his wife in the VISTA program, and after they married, they moved to Alaska. That is where their two daughters were born, and where he spent most of my adult life as a social worker in Ketchikan and later Glennallen. He retired from state employment and moved to Missouri in 1998, where he keeps busy enjoying two grandchildren; restoring antique furniture and theocratic activities. Barry assures us that he has not forgotten how important his years at Iowa State were in making him the person he is today. He thanks all of his professors and fellow graduate students for trying to make him a good geologist (which according to Barry "they failed at") and also a good citizen and adult.

Paul Hardersen

B.S. 1997; hardersen@aero.und.edu

Paul sends greetings from Hawaii! He has not left North Dakota (although the thought apparently crosses his mind on occasion, especially in February), but he has just finished his 11th research trip to the Big Island. He has been working at the NASA Infrared Telescope Facility (IRTF) conducting near-IR observations of main-belt asteroids since 2000. His current research on constraining the mineralogy of M-asteroids in the main-belt will be winding down in the next year or so and he is now attempting to obtain funding to find and constrain the number of igneous asteroids in the outer main asteroid belt via NIR spectroscopy. Since completing his Ph.D., he has obtained results that suggest that the initial heating of the asteroid parent bodies in the main asteroid belt in the early solar system epoch may have been stronger and more pervasive than is currently thought. If so, then this would also have an impact on the heating mechanism that actually heated the asteroids. Interesting stuff! The real appeal to Paul is that this work is a combination of geology and astronomy and gives him the best of both worlds (except hand samples, which would be really useful in definitively answering these questions!).

Paul and his wife, Cristina, are expecting twins in December and are in the midst of preparing for that also. They find out the sexes of the children later in August and so far everything has been going very well. According to Paul, the children will of course become geologists. (Editor's note: We expect them to come to Iowa State.)

Paul is also the Director of the North Dakota Space Grant Consortium (http://www.nd.spacegrant.org) and the North Dakota NASA EPSCoR program (http://www.ndnasaepscor.space.edu). Their primary goals are to support STEM research and education in North Dakota and to promote NASA-relevant research at North Dakota's two research universities (UND and NDSU). It is an effort to improve and expand these programs, but the process has begun and he hopes it will begin to bear fruit in the coming years.

Adriana Heimann (Ph.D. 2006) and her husband, Manuel, visiting Ames.

Adriana Heimann

Ph.D. 2006; aheimann@geology.wisc.edu

Adriana is currently at the University of Wisconsin in Madison undertaking postdoctoral studies with Clark Johnson on stable iron isotopes. Such studies are being used to investigate the origin of banded iron formations and to understand

the early atmosphere of Earth. Adriana recently had a paper in Geochemica et Cosmochimica Acta entitled "The role of volatile exsolution and sub-solidus fluid/rock interactions in producing high 56Fe/54Fe ratios in siliceous igneous rocks" with Brian Beard and Clark Johnson. She will be in Madison for at least one more year with her husband Manuel. Over the last year, she presented the results of her research at two Goldschmidt Conferences: Cologne Germany (August 2007) and Vancouver (July 2008). She has also been working with Paul Spry on submitting two papers related to her Ph.D. research on the geochemistry of garnet-rich rock types in the Olary Province, South Australia. Last year, Adriana had the opportunity to go to Uruguay, visit Ames, and to go on a field workshop to Ontario, Canada (where she was able to inspect various ore deposits). She is looking forward to attending the wedding of Nancy Scherbarth, who is a former graduate student of Paul Spry.

Scott Hemmingway (M.S.) and 10-year old son Jacob visiting Ames (from Seattle)

Scott Hemingway

M.S. 1995; sjhemingway@comcast.net

Scott had a chance to get out of Seattle to go on vacation this summer with his 10 year old son, Jacob. Among many things, he went to Yellowstone Park, took part in a family reunion in Minnesota, and visited family in Iowa. He has been serving as the general Manager of the Ames Lake Water Association in Washington over the last two years. Previously, he spent five years working for the Evergreen Rural Water Association.

Daniel Hummer

B.S. Geology; dhummer@geosc.psu.edu

Dan has let us know that school is going well, and that he is about a year away from finishing his Ph.D. He has been working on crystal growth in titanium oxide minerals (mostly rutile and anatase). He does time-resolved X-ray diffraction (XRD) experiments so that he can watch the changes in structure as the minerals are actually growing, and then analyze the XRD patterns after the experiment. He says it has been great to be involved in experiments that are trying to duplicate a natural process in real time, and figure out how it works. He published a paper in the journal "Powder Diffraction" about a year ago (D. R. Hummer, P. J. Heaney, and J. E. Post, 2007 - Thermal expansion of anatase and rutile between 300 and 575 K using synchrotron powder X-ray diffraction), and has submitted another one to "Nature"! It hasn't been accepted at this point, but he just recently heard that it went out for peer review. He will be traveling a lot this fall, mostly to collect the rest of the data for his thesis. It turns out he will be going to both GSA and AGU this year. He would love to meet up with faculty, students, and alumni at the meetings!

Richard (Dick) Iverson

B.S. 1977; riverson@usgs.gov

Dick continues his work as a senior research scientist at the U.S. Geological Survey's Cascades Volcano Observatory, where he focuses his efforts on understanding and forecasting the behavior of landslides and debris flows. He was delighted to visit ISU last October to serve as the department's Distinguished Alumnus lecturer. His visit was sullied only by the (not unexpected) loss of the Cyclone football team to the Oklahoma Sooners. Some of Dick's research on mass wasting can be viewed at http://vulcan.wr.usgs.gov/Projects/MassMovement

Joan Jach and Jason Thomason

Jach, M.S. 2004; Thomason Ph.D. 2006; jthomason11@yahoo.com

Joan and Jason are located in Champaign, IL and are employed with the Illinois State Geological Survey, which is now part of the Institute of Natural Resource Sustainability at the University of Illinois. During the past academic year, Joan taught a variety of courses at Illinois State University including Meteorology, Geography, Historical Geology, and Intro Geology. Jason's work at the ISGS includes the challenge of studying the 3D complexities of glacial deposits in northeast Illinois and how they relate to groundwater flow systems.

In May, Jason and Joan enjoyed a 10-day trip to Scotland and northern England. With geology books in hand, they enjoyed studying the metamorphic zones of Scotland and the geologic history of the Lake District in England. Beautiful garnets and ore-bearing rocks were plentiful. Luckily their bags were not searched in customs! Prior to that trip, Joan also attended a 2-week geology field course in County Clare, Ireland.

They have also enjoyed expanding their gardening hobby into more of a self-sufficient effort. They are venturing into the "world of the locavores" by growing many varieties and quantities of vegetables, herbs, and flowers and preserving them by canning and drying, hopefully enough to last the winter. Maybe chickens next year!

Elisha Kubalsky on a trip to the Adler Planetarium in Chicago

Elisha (nee Evers) Kubalsky

B.S. 2006; elishakubalsky@yahoo.com

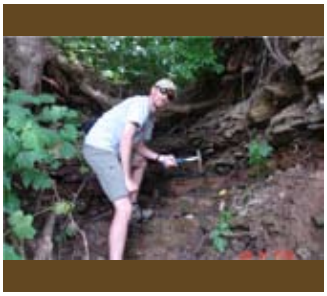
Over the past year, Elisha completed her Earth science education program and received her teaching certification for secondary science and gained employment at Assumption High School in Davenport, Iowa. Elisha and her husband recently purchased their first house, but they are currently

in India as part of his job rotation program. Elisha volunteers at local schools, travels as much as she can, and enjoys living on the stable basalt beds of the Deccan Plateau.

Jon Maifield

B.S. 1997; jmaifield@yahoo.com

Jon recently completed his eleventh year of teaching Earth Science to 8th graders, the past seven at Northview Middle School in Ankeny. He is also the head 9th grade girls basketball coach. Earlier this summer he took a fantastic course at UNI called the Geology of Iowa for Teachers. One of the attached pictures is from that week. Over the past few summers, he has taken some great trips to the western United States. Highlights include canoeing down the Missouri River in Montana, camping and whitewater rafting in Glacier National Park, hiking/wading up the North Fork of the Virgin River in Zion National Park, and, most recently, hiking and touring Denali National Park in Alaska. In his spare time he likes to play basketball, tennis, and golf and attend Cyclone football games.



Jon Maifield (BS 1997) chipping nautiloid fossils out of the Upper Ordovician Maquoketa Formation at the Graf roadcut near Dubuque.

Amber Nightengale

M.S. 2002; Amber.m.Nightengale@nga.mil

Amber is working as a Scientific and Technical Program Manager for the National Geospatial-Intelligence Agency's research and development office. She has been there for three years now. This spring, she was selected as a Service Chiefs' Intern to the Defense Advanced Research Projects Agency (DARPA) and was able to spend three months on a rotational assignment reviewing DARPA's compendium of advanced research projects. According to Amber "it was a really amazing experience!" Amber has been spending her free time travelling, both for work and fun, and enjoying the summer in DC. She recently returned from a trip to Boquete, Panama, where her parents are building their retirement home.

Other things of note, she was maid-of-honor in Julie Kruse's (B.S. 2002), now Gould's, wedding last November and has been in touch with quite a few of the Iowa Staters and Field Camp alums through Facebook! The power of the internet!

Lori Parrott

B.A. 1983; lkparro@comcast.net

Lori continues to work at Sandia National Laboratories, where she manages a group called Strategic Studies. They explore new topics for the laboratories that involve advances in technology as well as policy. She is married and has two children, ages 12 and 9.

Dennis Powers

B.S. 1967; dwpowers@evaporites.com

For 33 years, Dennis has been working full or part-time on the Waste Isolation Pilot Plant (WIPP) project in southeastern New Mexico. It is the first US facility to dispose of defense-related radioactive and mixed waste in an underground mined facility. The host rock is halite of the late Permian Salado Formation.

He has been fortunate to have really challenging research opportunities that commonly cross geological specialty boundaries. The geology continues to be a foundation for many applications, including geohydrological conceptual models that drive modeling of fluid flow in a domain with more than 10 orders of magnitude difference in hydraulic properties within the important fluid-bearing zone. The individuals Dennis has worked with have been excellent, both professionally and personally, which has made it pleasant and possible to undertake some challenging problems.

Along the way, some wilder events have taken place. Our announcement in 2000 (Vreeland et al., 2000; Powers et al., 2001; Nature) that, with high probability, his research group had recovered and revived viable bacteria from Salado halite received lots of press and reactions. Stratigraphic, sedimentologic, geochemical, and hydrologic data show the isolation of these rocks since approximately time of deposition. The strongest negative reaction is from the molecular evolution community. Such findings directly affect assumptions in their world. The recent description of cellulose preserved in these halites (Griffith et al., 2008, Astrobiology) provides direct evidence (without replication) of long preservation of macromolecules. Inferences regarding evaporites on Mars make these findings even more interesting. Dennis contends that the normal processes here on Earth of sedimentation, diagenesis, burial, and recycling through erosion or solution may provide varying periods of sequestration and re-introduction of bacteria, for example, into the surface environment.

Dennis Powers (BS 1967) on a drill site collecting cores of Permian rocks for geohydrological data and monitoring

Dennis and his wife, Becky, approach their 39th anniversary. Their three children and spouses pursue their various careers. Grandchildren are too far for really spur-of-the-moment visits, and Dennis doesn't have any time-line for retiring. The work is too interesting and plentiful to stop right now. And the El Paso, TX, area really is home after more than 25 years living there.

Nancy Scherbarth

M.S. 2002; nancy.scherbarth@tectonicres.com.au

Nancy is still working for Teutonic Resources as an exploration geologists in Western Australia. However, the good news is that she will be getting married to her long-time boy friend, Andy Czerw, who also works for the same company and is executive director of operations. They are happily living in a beautiful home in the Darlington Ranges of Perth. Nancy periodically gets back to her home in Wisconsin to see her family.

David Svingen

B.S. 1979; dmsvingen@terracon.com

The Svingen family has lived in Omaha, Nebraska for the past 23 years where he is a regional manager for Terracon Consultants, inc., a geotechnical, environmental, and materials engineering firm. He and his wife Julianne (ISU, BS, 1980) are the parents of three. David will complete a two-year term as President of the Nebraska Geological Society this fall; and was recently appointed a board member of the Nebraska Board of Geologists. He notes that ISU Geology Department alumni fill two of the eight slots on the Nebraska Board of Geologists (Tom Correll, B.S. 1984 is the other board member).

Mike Sweat

B.S. 1980, M.S. 1985; mjsweat@bresnan.net

The Wyoming Water Science Director for USGS took a new job in June, and so Mike is currently the acting director, and in the candidate pool for the permanent replacement. He took a break in early February to greet his first grand child, a girl (Julie Marie Lawatsch).

In May, Mike had his right knee reconstructed and lower leg straightened. Not a replacement, but lots of cutting, gluing, and screws to rebuild the joint. His left knee and leg get the same treatment in early November. Such fun getting old, but once it is all healed and he should be back to skiing and biking; however, hockey is now out.

Mike and his wife, Kat, celebrated their 30th anniversary this June, and Kat should graduate from Regis University in Denver in December with her BSN. Kat now works only part time and occasionally travels with Mike for work. His work-related projects span the state of Wyoming, along with MT, UT, and NE, with frequent trips to the regional offices of the USGS in Denver and Minneapolis. Mike should be at AGU in December if the legs heal alright, and he would love to see anyone from ISU or alumni who might be there.

Tracy Vallier

B.S. 1962; tlvallier@hotmail.com

Tracy says it is tough to leave an interesting geologic area when he has been in it, off and on, for forty-five years. Tracy is still pounding around Hells Canyon, trying to finish geologic maps of twenty 7.5-Minute quadrangles, even though logistics are a challenge and no one seems to care. He spent the month of May mapping in Hells Canyon and will return in 2009. He has turned to writing fiction and published his first book, *Conversations with an Idaho Bartender*, in April. A novel with the loess hills of SW Iowa as landscape, *Dark Shadows in the Loess Hills*, should be printed by Christmas. He has been retired from the USGS for eleven years and writing fills his spare time with thoughts of plots, characters, and landscapes.

Weihong "Lilly" Wang and Alessandro Zanazzi

Alessandro Zanazzi (M.S. 2004), Weihong "Lilly" Wang (M.S. 2004) and son Martin with colleague Leonardo Macelloni (Professor of Geophysics, University of Mississippi) at the Isle of Palms (South Carolina)

Weihong "Lilly" Wang (M.S. 2004 weihong.wang@msci.sc.edu) and Alessandro Zanazzi (M.S. 2004; azanazzi@geol.sc.edu)

After Lilly and Alessandro completed their Master's degrees in geology at ISU they moved to the University of South Carolina where they conducted research for their respective Ph.D. degrees. Lilly has almost completed her studies in the Marine Science program where she is investigating below ground carbon dynamics in salt marsh ecosystem using carbon isotopes and modeling, whereas Alessandro just completed his Ph.D. in the Geological Sciences program. He will be starting a postdoctoral research position at Yale University in January. Their son, Martin, who is happy and healthy, was born in 2005. Their summer activities included a trip to Italy to visit Alessandro's family.

David Wonder

B.S. 1983, M.S. 1987; wonder@netins.net

David read through the last alumni note he sent back in 2005 and realizes that not much has changed for him, except that the kids are 3 years older now. He still works from his home as an environmental consultant for Shaw Environmental and Infrastructure. When he is not in the office, he spends most of his field time in Nebraska and Kansas. In the process, he has developed a new appreciation for Nebraska (geology, that is - not the Huskers!). Beginning in the autumn, he and his wife, Vickie, will officially be empty-nesters (woohoo!!). Both daughters, Erin and Emily, will be attending the University of Chicago. Erin is in her fourth year and nominally majors in psychology, although her area of study and work is more aligned with behavioral neuroscience. Emily will begin her first year at U of C as a physics major, hopefully following closely in the footsteps of Heisenberg and Fermi.

David Wonder (BS 1983; MS 1987) and daughters, Emily and Erin, in Chicago in front of the Field Museum

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Fang, J., and Kato, C., 2007. FAS or PKS, lipid biosynthesis and stable carbon isotope fractionation in deep-sea piezophilic bacteria. In: Communicating Current Research and Educational Topics and Trends in Applied Microbiology (2007), The Formatex Microbiology Book Series (A. Méndez-Vilas, ed.), Formatex Center, Spain, 190-200.

Fang, J., Gupta, S. D., Hasiotis, S. T., Brake, S. S., and Bazylinski, D. A., 2007. Microbial community structure of a stromatolite from an acid mine drainage system, implications for the role of microeukaryotes in the formation of ancient Fe-rich stromatolites. Chemical Geology, 243, 191-204.

Fang, J., Lyon, D. Y., Alvarez, P. J. J., Wiesner, M., and Dong, J., 2007. Effect of a fullerene water suspension on bacterial phospholipids and membrane phase behavior. Environmental Science and Technology, 41, 2636-2642.

Harding, C., Oren, M., and Bonebright, T., 2007, Speeding Sonic Across the Span: a platform audio game. Proceedings of the International Conference on Auditory Display (ICAD), Montreal, Canada, June 26-29, 2007.

Helmers, M.J., Isenhart, T.M., Kling, C.L., Moorman, T.M., Simpkins, W.W., and M. Tomer. 2007. Water quality in Agriculture 101: Heterogeneity of pollutants, practices, and programs. Choices (www.choicesmagazine.org).

Iverson, N.R., T. S. Hooyer, U. H. Fischer, D. Cohen, P. L. Moore, M. Jackson, G. Lappegard, and J. Kohler, 2007. Soft-bed experiments beneath Engabreen, Norway: Regelation infiltration, basal slip, and bed deformation, Journal of Glaciology, 53, 323-341.

Jacobson, C.E., Grove, M., Vucic, A, Pedrick, J.N, and Ebert, K. A., 2007, Exhumation of the Orocopia Schist and associated rocks of southeastern California: Relative roles of erosion, synsubduction tectonic denudation, and middle Cenozoic extension, in Cloos, M., Carlson, W.D., Gilbert, M.C., Liou, J.G., and Sorensen, S.S., eds., Convergent Margin Terranes and Associated Regions (A tribute to W. G. Ernst): Boulder, Colorado, Geological of America Special Paper 419, p. 1-37.

Pals, D.W., and Spry, P.G., 2007. Telluride mineralogy of the low-sulfidation epithermal Emperor gold deposit, Vatoukola, Fiji – a reply. Mineralogy and Petrology, 90, 155-156.

Schilling, K.E., Tomer, M., Gassman, P.E., Kling, C.L., Isenhart, T.M., Moorman, T.B., Simpkins, W.W., Wolter. C.F., 2007. A tale of three watersheds: non-point source pollution and conservation practices across Iowa. Choices (www.choicesmagazine.org).

Spry, P.G., Heimann, A., Messerly, J., and Houk, R.S., 2007. Discrimination of metamorphic and metasomatic processes at the Broken Hill Pb-Zn-Ag deposit, Australia: Rare earth element signatures of garnet-rich rocks. Economic Geology, 102, 471-494.

Tombros, S., Seymour, K. St., Williams-Jones, A.E., and Spry, P.G. 2007. The genesis of epithermal Au-Ag-Te mineralization, Panormos Bay, Tinos Island, Greece. Economic Geology, 102, 1269-1294.

Voudouris, P., Spry, P.G., Melfos, V., and Alfieris, D., 2007, Tellurides and bismuth sulfosalts in gold occurrences of Greece: mineralogy and genetic considerations, in Kojonen, K. K., Cook, N.J., and V.J. Ojala (eds.), Au-Ag-Te-Se deposits, Proceedings of the 2007 Field Workshop (Espoo, Finland, August 26-31, 2007). Geological Survey of Finland Guidebook 53, p. 85-95.

New Faculty Research Grants in 2007

Beresnev, I.A., Quantitative characterization of the vibratory enhancement of organic-fluid flow in porous media: Integrated experimental and theoretical approach: National Science Foundation, $294,858.

Cervato, C., Academy of Applied Science, Research and Engineering Apprenticeship Program, summer 2007, $2,600.

Cervato, C., Ocean drilling data discovery, global visualization, and synthesis: National Science Foundation, $68,326.

Cervato, C., Enabling Query by Age through Web Services, Ocean Drilling Program, $85,000.

Cervato, C., Small County: Web-based Instruction in the Geological Characterization of Petroleum Reservoirs: National Science Foundation, $10,000.

Franz, K.J., Assimilation of MODIS snow cover products into operational hydrologic forecast models: National Aeronautics and Space Administration, $75,000.

Franz, K.J., Data Assimilation in Operational Watershed Models for Short and Long-term Hydrologic Forecasting: National Oceanic and Atmospheric Administration, National Weather Service, $28,000.

Simpkins, W.W., Quantification of Residential Nutrient Inputs into Lake Macbride from Groundwater, Soil Water, and Overland Flow: Iowa Department of Natural Resources, $24,242.

Spry, P.G., The geology, mineralogy, and geochemistry of base-metal sulfide mineralization in the Foster River area, northern Saskatchewan: Wildcat Exploration (Canada), $62,213.

Alumni Contributions to Geological Sciences: Iowa State University

I wish to support programs in Geological Sciences at ISU. Enclosed is my gift of:

____$1000

____$250

____$100

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Other $_____

Please specify the Geological Sciences fund that should receive your gift:

____Geology Development Fund (1949512)

____Geology Field Camp Fund (1948312)

____Quentin Schmidt Memorial Field Trip Fund (1900138)

____Geology Alumni Development Fund (1900040)

____Carolyn Jones-Eiler Scholarship (1908641)

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____Georgia L. and Carl F. Vondra Graduate Fellowship (2700426)

____Huedepohl Geology Field Camp Scholarship (2701147)

____Beck Family Scholarship (2702124)

____I will request that my employer match my gift (if appropriate) to the same fund noted above.
My employer is _____

____ For gifts of $100 and above you may choose to receive a 6" x 8" (landscape) plaque cut from a plank saved during the demolition of the renowned field camp "5-Holer." The plaque contains a metal plate with the inscription "Iowa State University, Carl F. Vondra Geology Field Station, From the "5-Holer" - In use 1958-2004, Certified Authentic by: [Carl Vondra's signature].

____ For gifts of $200 and above you may choose the 6" x 15" (portrait) version.

Your check, which may be made payable to the ISU Foundation, is tax deductible. Please include the fund number on your check, and return it with this form to:

Dr. Carl E. Jacobson, Chair
Dept. of Geological & Atmospheric Sciences
253 Science I, Iowa State University
Ames, IA 50011-3212

Beck Family Scholarship: Established by Jim and Denise Beck to help the department recruit the best undergraduate students, with particular emphasis on providing assistance for students to attend field camp.

Carolyn Eiler-Jones Scholarship: Established in the memory of Carolyn Eiler-Jones (B.S. 1973) by her family, this fund provides a scholarship for an undergraduate student to attend the summer field camp.

Geology Alumni Development Fund: Established by Geology alumni, this fund provides support for travel and other expenses associated with development activities.

Geology Development Fund: This fund is unrestricted. Generally, it has been used to support purchase and maintenance of equipment used in research and teaching, and to cover start-up funds for new professors.

Geology Field Camp Fund: This fund allows improvements in the facilities at the Wyoming Field Station.

Georgia L. and Carl F. Vondra Graduate Fellowship: Established in 2000 in honor of the distinguished contributions of Carl Vondra to the Department of Geological and Atmospheric Sciences. This fellowship is to attract an outstanding incoming graduate student by providing a fellowship above and beyond the stipend the student will already receive from a research or teaching assistantship.

Huedepohl Geology Field Camp Scholarship: Established in 2004 by Bradley Huedepohl (M.S., 1956) to provide a scholarship for an undergraduate to attend the summer field camp.

John Lemish Memorial Scholarship: John Lemish Memorial Scholarship: Established by Dr. Ramon Bisque (Ph.D. 1959) in 1989 in honor of John Lemish (Professor Emeritus) Provides a cash award to one or more outstanding graduate students with demonstrated research ability.

O'Brien-Lonsdale Endowment Fund: This fund will establish an endowed chair in geology.

Peter R. Johnson Memorial Scholarship: Established in the memory of Peter R. Johnson (B.S. 1977) by his family, this fund provides a scholarship for an undergraduate student to attend the summer field camp.

Quentin Schmidt Memorial Field Trip Fund: This fund furnishes financial support for class and departmental field trips.

Rodney D. Gardner Memorial Scholarship: Established in 1995 by the children of Rodney D. Gardner (B.S. 1962), this fund furnishes a scholarship to an undergraduate student on the basis of scholarship and financial need.

Thank you for your support!

Beck Family Scholarship
Benjamin Barnes (MS 1985)
James (BS 1968) & Denise Beck

Carolyn Jones-Eiler Scholarship
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